THE MEDICAL JOURNAL OF AUSTRALIA.

Vol. II.—2ND YEAR. SYDNEY, OCTOBER 2, 1915. No. 14.

AN ISOLATED EPIDEMIC OF BACILLARY DYSENTERY.

By **W. B. Nisbet, M.B.,**
Townsville.

Twenty-five years ago bacillary dysentery was a very prevalent complaint in North Queensland, but in later years it has become much less frequent, though outbreaks occur from time to time, as was the case at Thursday Island in 1912. The following small outbreak among the staff at a lighthouse on the North Queensland coast shows the necessity for strict sanitary and isolation measures on the nature of the first case being definitely recognized.

In the investigation into the spread of the disease in this instance, and the measures adopted for its extermination, I have had the benefit of the co-operation of Dr. Kingpatrick, Medical Inspector for North Queensland in the State Department of Public Health.

The community at the lighthouse included the following persons:—

Superintendent, his wife (first case), and one child.
First Assistant (fifth case) and his wife.
Second Assistant, his wife (fourth case) and two children (second and third cases).

The first patient developed sub-acute dysentery in the middle of March, and this attack continued with acute exacerbations for 10 to 14 days. She was treated by post and telephone during this period, but by this time had become so seriously ill that her removal to the Townsville Hospital became imperative. This was an undertaking of considerable difficulty, involving, as it did, a voyage of some distance along the coast. The disease during residence in hospital ran a more or less chronic course for four or five weeks, followed by a slow recovery. The patient eventually regained her normal health. In the meantime, two children of the Second Assistant developed similar symptoms. They were treated by post, and made slow recoveries, dysenteric symptoms persisting for about a month. A few days after the onset of the childrens' illness, their mother developed similar symptoms, considerably less in severity, so that she was able to attend to her household duties during the attack. The last case was that of the First Assistant, who developed, on May 13th, symptoms similar to those exhibited by the other patients. In this case the attack was a severe one, and the patient was removed to Townsville Hospital on the 16th. The clinical course and microscopic findings are recorded below.

The facts, as related, show that, out of a total population of nine persons, five individuals developed illness, similar in type and varying in severity, the symptoms in all the cases being such as are usually associated with acute bacillary dysentery. At first sight it seems difficult to explain the incidence of the infection in the first case, but, on making further enquiries, the fact was elicited that fishermen are in the habit of visiting the vicinity of the station, and that such visits had actually been noted prior to the first case. It is to be feared that these fishermen are somewhat indiscriminate in their habits and totally neglectful of ordinary sanitary precautions. In the event of any of these persons harbouring the bacillus, it seems reasonable to suppose that, by the agency of the sun and wind, these bacilli, having been liberated, are carried to the roofs and into the houses at the station, and thus infect the water supply and food. This hypothesis presupposes the existence of a "carrier" among the fishermen, and appears to me to be a reasonable explanation of the genesis of the primary case. The lighthouse is surrounded by sand on its shore aspect for many miles, and is about 22 miles from the nearest human habitation. This isolation has rendered the medical features of the outbreak of interesting conciseness.

Report on the Last Case by Dr. Henry Priestley, Australian Institute of Tropical Medicine.

E.B., male, aged 49 years, was admitted to the Hospital on May 17th, 1915, with a history of profuse diarrhœa, with bloody stools. He passed as many as 24 motions in 24 hours, and the motions, which were small, consisted almost entirely of mucus and blood. He was put on the usual treatment, with magnesium sulphate and sodium sulphate, and responded well. On admission, his temperature was 100.8° F. During the following twelve days he exhibited irregular fever, ranging between 98° and 100° F.; subsequently his temperature became normal. The profuse diarrhœa ceased three days after admission, but there was a little blood and mucus in the stools for some days later. On the fourteenth day after admission his motions were quite normal in character.

Bacteriological Examination.—On the 18th May a portion of mucus from a motion was rubbed up in broth, and spreads made from this broth on MacConkey's bile-salt lactose neutral red agar. An almost pure culture of dysentery bacilli was obtained. The bacilli were gram-negative and non-motile. They fermented glucose, mannite and maltose, without production of gas, but not lactose, saccharose, dulcite, adonite nor inulin. Indol was produced in broth cultures. The bacilli were not agglutinated by a Shiga antiserum in 1:100 dilution, but showed slight agglutination with Flexner antiserum 1:100. It is clear that the bacilli belong to the mannite fermenting group of dysentery bacilli, and resemble most closely the Flexner type, except in the agglutination reactions.

RUPTURED ECTOPIC GESTATION; DIAGNOSIS BY PHYSICAL SIGNS.

By **Arthur J. Nyulasy, M.R.C.S. (Eng.),**
Gynaecologist to the Perth Hospital.

In a classical case of ruptured ectopic gestation, the diagnosis is comparatively easy—the pain, shock,

pallor, restlessness, air-hunger, and history indicating the nature of the catastrophe. In many other cases, however, the symptoms are decidedly equivocal, while the history may afford little help, and, indeed, in some instances, may prove to be a deliberate misrepresentation.

Realizing the difficulty of diagnosis in many atypical cases of ruptured ectopic gestation, I have endeavoured to ascertain whether a solution of the problem might not be found in a study of the physical signs of the condition. The result of this enquiry encourages me to believe that the surgeon may be enabled to make a practically certain diagnosis of ruptured ectopic gestation almost independently of the history or of the symptoms.

In two cases in the Perth Hospital in June and July, 1915, the diagnosis of ruptured ectopic gestation was made on the operating table, before the abdomen was opened. In both instances, with the patient in the lithotomy position, blood was seen to be issuing from the uterine canal, while the cervix was felt to be softened. Both of these signs were, of course, quite consistent with pyo-salpinx, for which the cases were admitted. On bimanual examination, a mass was felt in Douglas' pouch, extending from the left Fallopian tube. It was largely the character of this mass that directed me to the diagnosis of ectopic gestation. To my fingers in the vagina it seemed to lack that firmness and thickness of wall, with general thickening of Douglas' pouch, which I am accustomed to associate with pyo-salpinx. There was a bogginess and lack of definiteness which suggested the probability of free blood and clots about the mass. On curettage I then found that the endometrium was friable and thick, and came away like a moss, the change from the thick membrane to the uterine muscle, with its *cri utérine*, being abrupt and remarkable. I felt satisfied that I was dealing with a decidua, and therefore called for the mackintosh apron I usually wear when operating in cases of ectopic gestation. This diagnosis was confirmed on opening the abdomen. In one of these cases the abdomen contained a considerable quantity of blood, so that there must have been dulness in the flanks, although this valuable sign was not looked for in making the diagnosis.

A remarkable, and hitherto unrecorded, sign, which I have observed in some cases of ruptured ectopic gestation, is a localized pallor of the external genitals and immediately adjacent parts. When the colour of the face is good, and this physical sign is present in marked degree, it is diagnostically of the highest significance, if not actually pathognomonic. Thus, in a case operated on in the Perth Hospital on the 11th August, 1915, the patient had a particularly good colour in the face, her rosy cheeks suggesting excellent health, and the tint of the mucosa of the lips and eyelids being normal. In the lithotomy position, however, the external genitals and perineum were seen to be strikingly pale, the impression conveyed being that the blood had been drained out of the parts to a large extent. The *cervix uteri* was softened, while a little blood was oozing out through the external os. On curettage, there was an absence of that "slimy" sensation usually conveyed from the endometrium through the curette in cases of chronic endometritis. On the other hand, the lining of the uterus seemed to have been largely shed, the curette coming down almost immediately on to the uterine muscle, and bringing out the characteristic ring. In small patches, however, there was thick, friable membrane, which was removed with exceptional ease by the curette, the transition from the moss-like membrane to the uterine muscle being peculiarly abrupt. A mass in Douglas' pouch felt boggy and wanting in definition. On these facts a diagnosis of ruptured ectopic gestation was made. On cœliotomy, very dark blood and clots were found encysted behind the uterus, as the result of rupture of the left gravid tube, which had evidently taken place some weeks prior to operation.

In a private case operated on on the 19th August, 1915, with the assistance of Drs. Cuthbert and Watch, the diagnosis was also made from the physical signs. The patient, a young woman, presented a rather sallow complexion, but the mucosa of the lips and eyelids was of the normal pink colour. The tongue was clean, there was tenderness on pressure over the left pelvic abdomen, but no distension was present. The scar of an old median supra-pubic incision was noted, and there was dulness in both flanks. The temperature was normal, and the pulse somewhat atonic and slightly hurried. *Lineae albicantes* were present on the lower abdomen, and there was nothing in the breasts to suggest an existing pregnancy. There was pallor of the external genitals, especially obvious on everting the nymphæ. The *cervix uteri* was distinctly softened, and there was slight uterine hæmorrhage. Curettage was not carried out, so that the presence of a decidua was not determined. A somewhat tender, boggy, and rather ill-defined mass was felt in Douglas' pouch, and extending up to the left. On these facts I made a diagnosis of ruptured ectopic gestation. On opening the abdomen a large quantity of dark blood and clot was found, as the result of rupture of the left gravid Fallopian tube. The operation proved exceptionally difficult, on account of a multiplicity of adhesions, partly due to the extravasated blood, and partly connected with a former operation.

As the result of my observations up to the present, I would formulate the physical signs of ruptured ectopic gestation as follows:—

(1) Pallor.—As the effect of profuse intra-abdominal hæmorrhage there is bound to be marked and obvious anæmia. In cases, however, seen some weeks after the hæmorrhage has occurred, there may be little evidence in the face to indicate the loss of blood.

(2) Absence of pyrexia and of increased pulse-rate.—The presence of pyrexia and raised pulse-rate does not negative ectopic gestation, but these signs are more likely to be found in pyo-salpinx.

(3) Mammary changes may be present in nulliparæ. If *lineae albicantes* are found on the abdomen, signs in the breasts will have much less probative value.

(4) A tender mass in the pelvic abdomen. On bimanual examination, this mass has often a boggy character, and is apt to lack the definition and firmness of pyo-salpinx.

(5) Dulness in the flanks is a valuable sign, especially in a pallid patient obviously not suffering severely, and not showing evidence of sepsis (temperature, pulse, etc.). The tests for free fluid are: (*a*) Dulness in ordinary percussion; (*b*) shifting dulness; and (*c*) the "Staccato Touch." If the flank is struck sharply and lightly in a staccato fashion by the point of the finger, the characteristic sound of percussed fluid is plainly heard. This test is, I believe, original.

(6) Pallor of the external genitals is the most valuable single sign of atypical ruptured ectopic gestation, where the colour of the face is good. To bring it out well a good light and the lithotomy position are almost essential. This sign has not hitherto been described in the literature. When present in marked degree, with the face of good colour, it is, I believe, pathognomonic.

(7) Uterine hæmorrhage, if small in amount, is always a suspicious sign, but may be met with in pyo-salpinx.

(8) Softening of the *cervix uteri* is an important sign, but may occur with pyo-salpinx.

(9) The presence of a decidua, discovered by the curette, is of the highest probative value, although I cannot recall any reference to it in the literature. The possibility, however, of an early-month abortion, which has been followed within a short time by a pyo-salpinx, should not be overlooked in making a differential diagnosis. In a case of bicornuate uterus, in which the left gravid horn had ruptured, a decidua was detected by the curette in the right horn.

With the analysis of further material, the foregoing signs may perhaps be modified or augmented, but, as I have stated them in this preliminary communication, they are of unquestionable value in the attempt to make a correct diagnosis in atypical cases of ruptured ectopic gestation.

Reports of Cases.

TWO CASES OF INTESTINAL OBSTRUCTION.[1]

By **P. Blackall, M.D., M.Ch., R.U.I.,**
Queanbeyan, New South Wales.

On the 11th of February, 1914, I was called to see Mrs. W., who was suffering from severe abdominal pain. She stated that she was seized with an attack of diarrhœa two days before. At first the diarrhœa was profuse, but was not associated with pain. Gradually the diarrhœa became less and the pain increased. When I saw her the diarrhœa had ceased, but the pain was intense. There was no noticeable abdominal tenderness or distension. The pain was referred to the umbilical region, and was colicky in character. There was no vomiting. An enema of soap and water brought away practically nothing. A hypodermic injection of ¼ grain of morphine, with $^1/_{120}$ of atropine gave great temporary relief. Next day the pain returned with increased violence. A repetition of the hypodermic injection eased it for a couple of hours, but no longer. The patient now began to vomit a little. A dose of Epsom salts was given, after which the vomiting increased, and about six hours later the vomiting became stercoracious. The patient was removed to the local hospital, and soon after her arrival there I opened the abdomen and found the ileum obstructed by a gall-stone about three feet above the ileo-caecal valve. I removed the stone through an incision along the convex surface of the bowel. The temperature remained normal throughout, although I had some trouble from a suppurating track between the skin and the abdominal muscles, apparently caused by an infected retractor accidentally soiled during the operation. Drs. Richardson and Lalor assisted at the operation.

The previous history of the patient is important. She had been a very healthy woman up to February, 1912. She then began to suffer from biliary colic, and continued to suffer from severe and frequent attacks until August, 1912. She had been free from attacks since then. In February, 1913, she had a severe operation for malignant disease of the breast. She enjoyed good health from that time until the 9th February, 1915. She has enjoyed excellent health since her discharge from the hospital.

I wish particularly to draw your attention to the fact that the patient had no trouble from gall-stones from August, 1912, until she got obstruction of the bowels in February, 1914. Notice also the fact that the obstruction appeared to be brought on by an attack of diarrhœa.

On 21st September, 1914, Mr. A. W. came to my surgery. He stated that he was quite well the day before and had a hearty supper before going to bed. About midnight he awoke in great pain. I sent him to the hospital, where I saw him soon afterwards. His temperature was subnormal and pulse-rate 64. The abdomen was retracted; the tongue was fairly clean. There had been no vomiting. He complained of severe, colicky pain. There was an abdominal scar, which marked the site of an operation for appendicitis, performed in one of the large hospitals in Sydney, eighteen months before. I gave him a calomel tablet (gr. v.), and ordered him an enema. I told the matron to let me know if the patient appeared to be doing badly.

Early next morning the matron telephoned that the patient was unable to pass water, and was in much distress in consequence. I went to the hospital without delay, and on examining the patient I found a very marked swelling just above the pubis. It was very tender and was dull on percussion. It appeared to me to be a distended bladder. I passed a catheter, but, to my surprise, I drew off only about eight ounces of urine. The swelling remained unaltered. I was told that there was some result from the enema, but not what might be termed a satisfactory motion. The bowels had not acted since. There had been some vomiting of green slime. The patient informed me that no flatus had passed and that he felt if there was some blockage in his bowels. His abdomen had become very tender and somewhat distended. He had had a dose of *mistura alba* and one of *mistura sennae composita* during the night. The temperature was still sub-normal, and the pulse rate 72. He was prepared for operation, and, assisted by Drs. Richardson and Christie, I opened the abdomen. A mass of gangrenous intestine presented at once. On examination, I found a strangulation caused by a strong band of fibrous tissue, attached to the front of the abdominal wall. The constriction was very tight, so that I had difficulty in getting a director through it. I removed about four feet of dead intestine. The part of the ileum below the dead intestine was so matted together and bound down by old adhesions that all I could do was to close the cut upper end and leave it. The other cut surface was sutured into the lower end of the wound to form an artificial anus. Unfortunately, I could not get a Paul's tube. There was consequently much soiling of the wound and ultimately some leakage back into the peritoneal cavity. On the 28th September (that is, six days after the first operation), the abdominal wound was reopened, the end of bowel which was sutured in the wound and served as an artificial anus was cut off and a T-shaped junction with the ascending colon was effected. I found a considerable collection of pus in the pelvis, which I washed out and cleaned up as well as I could. I put a drainage tube down to where the end of the small intestine was sutured to the side of the colon. The bowels acted natur-

[1] Read at a meeting of the Central Southern Medical Association on September 8, 1915.

ally the day after the operation (29th September), and they continued to act naturally every day until the 5th October. By this time there was considerable leakage of fæcal matter through the abdominal wound, and the bowels acted only when an enema was given. The leakage of fæcal matter through the wound made the skin very sore. I found carbonate of bismuth the best application for it. I gave bismuth by mouth, in the hope that it might help the closing up of the fistula. The fistula closed slowly and the bowels began to act naturally after about three weeks. The patient remained very weak for some weeks longer, and I began to fear that so much of the intestine had been removed and so much thrown out of circuit that the patient would not be able to get along with what was left. This fear, however, proved groundless, as, after a while, the patient began to recover strength rapidly, and when he left the hospital, on the 30th December, he was quite strong and nearly up to his usual weight. All his wounds had healed some weeks before he left the hospital. I met the patient quite recently in Sydney, looking remarkably well. He assured me that he was enjoying excellent health, that he was in constant employment and was getting on splendidly with his work. During convalescence, the temperature only exceeded 100° F. on two occasions. It fell to normal each time after a few hours.

Reviews.

ELEMENTARY ANATOMY AND PHYSIOLOGY.

Dr. H. Clifford Barclay has written a text-book on elementary anatomy and physiology[1], for use by probationers in hospitals, and by students in schools. It is divided into four sections. The first portion, comprising 141 pages, deals with the anatomical structure of the human body. It is designed for those who are unable to dissect the actual structures. Where it is possible organs obtained from the butcher are described, so that the student may handle an actual specimen, not markedly dissimilar from the human organ. The microscopical appearances of the tissues and organs are briefly described. Much information on the pathological changes that may occur in each portion of the body is incorporated in each chapter. This information is of value to nurses, but of little real value for school children. It is doubtful whether it is desirable to give a superficial acquaintance with pathological processes and with diseases of special parts of the body to school pupils. The second section, comprising 82 pages, gives a brief account of the functions of the organism and its component parts. This account is rather meagre and incomplete. It does not give a connected account of the elementary facts of physiological science, though it contains much that nurses will find useful in their duties. The section seems well adapted to provide those nursing the sick with facts of practical importance in the care of their patients. The third section deals with the development of the human embryo, and contains a summary of the mode of causation of the principal congenital defects. The fourth section contains a sketch of comparative anatomy, and a few pages on the nature of antibodies. The work is well illustrated, and printed on thin rice paper. As a text-book for nurses it can be heartily recommended, but it is hardly suited for use by school children.

PHYSIOLOGY.

The seventh edition of Stewart's Manual of Physiology[2] appears just four years after the sixth edition. It is eighteen years since the book was published, and the number of editions and reprints bear testimony to the popularity of the text-book with students of physiology. The present edition shows many signs of a thorough revision, especially in the division of many sections into chapters, which makes reference to any subject more rapid and convenient. The manual still retains the characteristic feature of its plan, in the insertion of directions for practical physiology at the end of each chapter. It thus serves as the text-book of physiology in the study and as the handbook in the laboratory.

The departments of physiology over which Professor Stewart has presided have always been centres of research conducted in many branches of investigation connected with experimental medicine. As a consequence, his manual is brought well up to date, while, at the same time, praiseworthy discrimination has been exercised in keeping new facts in their relative proportional position to the accumulated information on any subject.

It is impossible within the compass of a brief review to mention more than a few subjects in which physiological science has recently rendered assistance to clinical medicine and therapeutics. In the sections dealing with the chemistry of respiration and the gases of the blood, a summary is given of the many investigations into the control of the act of breathing, the union of oxygen and hæmoglobin and the internal respiration of the cells of the tissues. The regulation of the ventilation of the lungs by the tension of hydrogen ions in the blood can be affected by an increased tension of carbon dioxide in the alveolar air, or by the accumulation of carbonic acid or other organic acids in the blood. Clear ideas as to the tension of carbon dioxide in the alveoli of the lungs have lead to the recognition of the lack of importance of estimations of carbon dioxide in the ventilation of rooms and halls. It is therefore necessary to investigate the amount of moisture in rooms and the relation of this factor to proper ventilation of rooms.

A brief and accurate account of the curves taken with a string galvanometer of the electrical variations of the human body occasioned by the beat of the heart forms part of the chapter on electro-physiology. The chapter on metabolism and nutrition form one of the features of the book that deserve unstinted praise. This manual can be confidently recommended as a text-book of physiology for medical practitioners and students.

Notes on Books.

NATURALISTS IN NEW SOUTH WALES.

The latest *Journal and Proceedings of the Royal Society of New South Wales* contains the papers read before the Society at the first two meetings of 1915[3]. Mr. Charles Hedley took as the subject of his Presidential Address the ætiological study of the beaches of Port Jackson and the neighbouring ocean. In some 60 pages he gives an interesting account of the forms of life found on the water frontages of Sydney. He describes how these plants and animals are associated together on the various types of foreshores. He introduces a short summary of the conditions of the environment in which one of the most varied and remarkable collections of living creatures found together in a single locality exist. He notes the changes that have occurred from decade to decade with change of climate, the lapse of time, the occurrence of epidemics, and the accidental introduction of new forms of life. Port Jackson not only stirs the soul of the artist by its beauty, but its wooded shores, rocky promontories and secluded beaches delight the naturalist. Dr. Hedley's paper will enable the citizen who has frequented the harbour in search of recreation and pleasure, to learn the nature of those things with which he has idled on the shore. Mr. R. H. Cambage describes the seedlings of the "Wattles," which shed the brightness of their golden blossoms through the sombre green of the bush in spring and early summer. The Rev. W. W. Watts contributes some notes on a common fern, and with Dr. Brotherus, a paper on the mosses of the New Hebrides. Mr. M. S. Benjamin publishes a note on the occurrence of urease in certain plants.

[1] Lectures on Elementary Anatomy and Physiology, including Short Sketches of Biology, Embryology and Comparative Anatomy, by H. Clifford Barclay, M.D., Ch.B., F.R.C.S.E., M.R.C.S.: Second Edition, 1915. London: Baillière, Tindall and Cox; Demi 8vo., pp. 281, with 22 plates and 57 figures in the Text. Price, 6s. net.

[2] A Manual of Physiology, with Practical Exercises, by G. N. Stewart; Seventh Edition, 1914. London: Baillière, Tindall & Cox; Demy 8vo., pp. 1160, with a coloured plate and 467 illustrations. Price, 18s. net.

[3] Journal and Proceedings of the Royal Society of New South Wales, Vol. XLIX., Part I., 1915. Sydney: The Royal Society; London Agents: G. Robertson & Co.; demi 8vo., pp. 144, with 12 plates, containing papers read in May and July (in part).

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SATURDAY, OCTOBER 2, 1915.

A Federal Serum Institute.

A proposition has recently been laid before the Minister for Customs (Mr. Tudor) by the members of the Melbourne Metropolitan Hospitals Board of Supplies, which should attract the attention of the medical profession throughout the Commonwealth. It is suggested that a Federal Government Institute for the preparation of therapeutic sera, vaccines and organ extracts should be established. Various arguments in favour of the proposal were adduced during an interview which the Minister accorded to the members on September 21, 1915. After listening attentively to these arguments, Mr. Tudor pointed out that, although money could not be spent as freely at present as in normal times, he regarded the health of the people as of such importance that he would lay the matter before the Cabinet at an early date.

The conditions of war have revealed in a most emphatic manner the advisability of home production of necessities. It may therefore be laid down without hesitation that, provided that the various laboratory products can be prepared economically, sold at a reasonable price and be kept up to a high standard of activity, the advantages of home manufacture are undoubted. It may, however, be pointed out that independence has more than a political or commercial significance. At present, antitoxins and similar laboratory products have to be imported from Europe or America. The supply is not measured by the demand, but is based on an average of the amounts used during the immediate past. Since epidemics are erratic, unless an excess is ordered and stored, a shortage must occur from time to time. The waste connected with the storage of an excess of these products is considerable, more especially if the sera have already been exposed to high temperatures in transit and if they are no longer fresh when they arrive in the Commonwealth. In the next place, the importation of sera, etc., from a large number of different sources entails a very considerable variation in the standard. Pharmacologists throughout the world have been at pains to standardize drugs with precision and uniformity; in the case of diphtheria antitoxin, a uniform measure of activity has been introduced, and it therefore follows that the introduction of fixed standards for all these products is a matter of primary importance in the treatment of disease. Not long ago MacConkey issued a serious warning against the habit of recording the measure of the dose of therapeutic sera without reference to the number of antitoxic units contained per cubic centimetre.

Having accepted the premise that Australian manufacture of sera, vaccines and organic extracts is an urgent necessity, we have to consider whether this manufacture should be entrusted to commercial firms or whether it should be undertaken by the Commonwealth Government. Private initiative is usually preferable to national undertaking. But private enterprise carries with it two conditions which are highly undesirable when applied to the instance under discussion. In the first place, the price becomes unduly inflated, and since these preparations must be available for all classes of the community, high prices prepare the way for a specially undesirable form of State interference between the public and the medical profession. In the second place, the supply and standards are much more difficult to control when the production is undertaken by independent firms.

For some years, it has been felt that the standardization of sera and similar preparations in England should be carried out in one institute, which should have Government recognition. The suggestion has been made that the Lister Institute for Preventive Medicine would be the proper place where this control could be carried out. Under the conditions obtaining in Great Britain, the advisability of divorcing the preparation of the sera from the standardization was raised, and the opinion was arrived at by many competent authorities that if the Government would utilize the Lister Institute for this purpose, the production of sera for sale should be discontinued. It must, however, he pointed out that the greater part of the income of this Institute is derived from the sales of sera and from the fees paid for routine diagnosis work. In other countries a Government institution has combined the work of

standardization with that of preparation, and, as far as we are aware, no real objection has been raised to this practice. In Australia, the arguments in favour of combining the preparation with the standardization is stronger than in Europe, since commercial firms have not flooded the market with sera, good, indifferent and bad. It would, therefore, be of advantage to the public and to the medical profession in every State if the Commonwealth Government established a properly equipped institute for this purpose. One essential must be insisted on. The institute must be placed under the care of a highly trained and expert bacteriologist. The administration might be controlled by a Director, possibly an expert in the Federal service, but all matter appertaining to the production of sera, vaccines and organ extracts must be left entirely to the medical superintendent or head of the institute. If the scheme is carefully evolved and well carried out it should be a profitable undertaking, both as regard money and as regard public utility.

DIPHTHERIA CARRIERS.

The prevention of diphtheria has proved a stumbling block to those responsible for the administration of the public health measures throughout the world. There are definite difficulties in this connexion, but from a theoretical point of view, none of these should be insurmountable. For some considerable time, the Metropolitan Municipalities of Melbourne have been considering this question, and have met in conference, with a view of formulating a policy based on the advice given by experts. As a result of the conferences, a report has been drawn up and submitted to the Minister for Health, and, in addition, a deputation has urged on him the advisability of adopting the recommendations. These recommendations are entirely concerned with the treatment of carriers. We are informed that the Minister has not yet given a definite reply.

According to the report, a bacillus carrier is more dangerous than a child suffering from clinical diphtheria, because while the latter can be dealt with without difficulty, the former may escape detection altogether. Various proposals are made in regard to the tracing of diphtheria carriers in schools. These proposals are sensible and rational, save in one particular. It is suggested that nurses be employed to remove mucus from the fauces of children for the purpose of bacteriological examination. Dr. F. V. Scholes, however, points out that the results of the examination of swabs carrying mucus from the fauces of children are often erroneous. The reason for this is not far to seek. In order to obtain satisfactory results in bacteriology, a sound training in technique is essential. When the mucus is to be examined, as much care, skill and knowledge is required as when colonies are being isolated from plate cultures. In other words, the person removing the mucus should have bacteriological experience, and it would be advantageous if culture tubes were inoculated at once from the swabs instead of the latter being sent to the laboratory.

In the second chapter of the report the suggestion is made that carriers should be isolated, preferably in an isolation home attached to the Infectious Diseases Hospital. Here, again, the main points cannot be gainsaid. It is possible that the danger of the bacillus carrier has been exaggerated to some extent during the past few years, and that other factors in the ætiology of the disease have been pushed unduly into the background. But every hygienist will agree with the necessity of cutting off the source of infection by rendering these unconscious intermediaries harmless.

A carrier is often a past sufferer from diphtheria. At times, however, the person harbouring diphtheria bacilli has never shown any clinical manifestations of the disease, and is apparently in no immediate danger himself, despite the presence of the tiny monsters in his throat. This fact is highly suggestive. The average healthy individual does not acquire diphtheria. His powers of resistance or immunity are sufficient to protect him. When diphtheria antitoxin was found to be of immense value in the treatment of the disease, it was thought that it would act equally well as a prophylactic. But it has been shown by von Behring that the immunity induced passively by antitoxin contained in a heterogenous serum is very evanescent. Active immunization is too slow for practical employment in an outbreak of diphtheria in schools, but passive immunization induced by the injection of antitoxin contained in a homogenous serum has been found to be power-

ful, harmless and lasting. A practical difficulty presents itself in connexion with this suggestion. Even if an ample supply of human antitoxic serum were available, objection would be raised to its employment on account of the possibility of the conveyance of syphilis or other infective disorders. No doubt these dangers could be overcome, but public prejudice would be difficult to displace. As an alternative, or perhaps compromise, von Behring has employed simultaneous active and passive immunization by means of a mixture of antitoxic horse serum and diphtheria toxin. More experience is required as to whether the results derived from this mixture are as good as von Behring has stated them to be. But in any case, the problem would be satisfactorily solved if either a passive immunization with a homogenous serum or this mixed immunization were employed throughout a school when a case of diphtheria occurred among the pupils. This method would be more economical and more effective than searching for bacilli in the throats of the class mates of the patient and adopting isolation in the hope that the bacilli would soon disappear. The task would be rendered less difficult if the children in schools were properly controlled by medical officers and not allowed to get into a condition of lowered resistance.

In the meantime, until measures of active or passive immunization are employed, a control of bacillus carriers is a necessity.

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HOW TO PREVENT CEREBRO-SPINAL FEVER.

The District Commandant of the 1st Military District has re-issued the instructions, which were sent from headquarters some little time ago, in regard to the prevention of the spread of cerebro-spinal meningitis. These recommendations are stated to have been drawn up by a body of experts, after discussion at a conference. We venture to express the opinion that the measures prescribed are not likely to effect a diminution of the number of cases of this disease, and, further, that much harm would be done if they were followed on anything like a large scale. The first four suggestions are excellent, and cannot fail to improve the health of the troops, but they should have been carried into effect from the first. They include the avoidance of overcrowding, the institution of efficient ventilation, the maintenance of personal hygiene and the improvement of the sanitation of camps. The fifth requires the isolation of all men with severe catarrh of the naso-pharynx. This might entail the isolation of 80% of the men in training. The sixth prescribes the liberal use of eucalyptus oil. The entire absence of any evidence of a therapeutic or prophylactic action of eucalyptus, and the experience that this form of treatment is useless render this suggestion inexplicable. The eighth, ninth and tenth recommendations are good, but self-evident. No patient shall be discharged from hospital after recovery from the illness until the meningococci have disappeared from the fauces; systematic bacteriological examination shall be carried out in all cases in which sore-throats and catarrhs are present; and no recruits shall be admitted to infected camps at present. The eleventh item is, in our opinion, very undesirable. It is that vaccination and inoculation (presumably against variola and enteric fever respectively) shall be temporarily suspended in infected areas. Why men should be subjected to the additional risk of smallpox and enteric fever, because a third infective process is epidemic, we do not know. The last recommendation is good, but has been carried out in all camps. All contacts shall be isolated until the incubation period has passed.

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A FEARFUL PROSPECT.

The medical profession enjoys the reputation of disinterestedness and public spiritedness. The amount of unpaid work accomplished by doctors exceeds by far the amount carried out by the members of any other profession. As long as doctors remain their own masters and can regulate their own practices, this spirit will pervade their dealings with patients. The moment the State takes on itself the control of medical practice, the stimulation to work for the benefit of the patients, no matter what the gain for the doctor may be, will disappear. A suggestion is to be laid before the New Zealand Parliament, which, if given effect to, will destroy all that is valuable in the practice of medicine. Mr. B. Fletcher gave notice on September 21, 1915, that he would ask the Minister for Internal Affairs to amend the Medical Practitioners' Act, 1914, to provide for the right being extended to any rejected candidate for registration as a medical practitioner to submit himself for examination, and on passing this examination, provided that the applicant be of good character, to be entitled to registration. Further, Mr. Fletcher wishes to make it compulsory for any registered medical practitioner practising medicine to meet in consultation any other registered practitioner, provided that a fee of not less than one guinea be tendered. The penalty suggested for refusing to meet another practitioner is the removal of the name from the register. In the third place, he urges that the University system should be widened by giving assistance to all Universities with medical schools to create facilities for young men to proceed with the course of study. This clause ends with the sentence: "and, further, to nationalize our medical system." In order words, the proposals would destroy the independence and initiative of the practitioner, would open the door to any young man who thinks he would like to become a "sawbones," and would degrade the profession from the rank of the learned professions. A cheerful outlook!

Abstracts from Current Medical Literature.

DERMATOLOGY.

(127) Madura Foot.

H. C. Semon (*British Journ. of Dermatology*, June, 1915) reports a case of madura foot in a Sepoy from the north-west provinces of India, where the disease is not so prevalent as in Southern India. Whilst in France his right foot was crushed by an ammunition box. He did not report the injury till six weeks later, when amputation was proposed, but refused. Doubtless the disease was contracted in India, and the clinical manifestations appeared simultaneously with the injury to the foot. The temperature was normal, pain absent or slight, pruritus and a continuous discharge remained throughout. The Wassermann reaction proved to be negative. Areas of dark skin covered part of the swollen right foot, situated in which were soft, protuberant masses of dusky, purple granulations. Minute black granules, which, both microscopically and culturally, conformed to the mycetoma fungus, appeared in the clear fluid, and in the pus which at times exuded from the sinuses. The arch of the foot tended to become obliterated, and walking became more difficult. Few cases only of a special variety have yielded to curetting in the early stages. If not treated by early amputation, the disease usually terminates fatally through secondary septic infection.

(128) Pemphigoid Eruptions.

Malcolm Morris (*British Journ. of Dermatology*, July, 1915), continuing the discussion on the pemphigoid eruptions, referred to the slight advance that had been made since the last debate, in 1898. After attending Hebra's clinics in 1871, he left Vienna, regarding any disease presenting bullæ of moderate persistence as pemphigus, accidental bullæ excluded. He held that the disease dermatitis herpetiformis was a distinct entity, and agreed with the original classification of Tilbury Fox and Duhring, who regarded it as differing essentially in its characters from chronic pemphigus, although this view was strongly opposed at the time by the Vienna school. He considered it would be a distinctly retrograde step if those well defined cases were put back into the group, from which they had been differentiated by a triumphant piece of analysis. The ætiology of dermatitis herpetiformis still remained obscure. Considering the differential diagnosis between dermatitis herpetiformis and pemphigus, one point had to be emphasized, *viz.*, the extraordinary depth of the vesicles in the former. As these begin to form, the itching becomes intense. The patients produce deep excoriations, rupturing the vesicles and giving immediate relief. In pemphigus the itching is not so severe, and the lesions are too painful to be excoriated. For many years he had observed cutaneous diseases in children, and not in a single instance had he noticed a case which conformed to the dermatitis herpetiformis type. The mucous membrane of the mouth was more frequently affected in pemphigus, and this constituted another important differential point. Arsenic was a more reliable remedy in pemphigus than in dermatitis herpetiformis. Some cases of the latter were benefitted by warm, alkaline baths; sulphur ointment seldom influenced the disease. Alkaline applications, such as carron oil or zinc cream had been observed to give relief after the lesions had burst.

(129) A New Position in Radiographing the Shoulder Joint.

W. S. Lawrence describes a new position of X-raying the shoulder joint and its immediate surroundings, which will yield information in the antero-posterior direction (*Amer. Journ. Röntg.*, April, 1915). The technique is as follows: The tube, with cylinder attached, is directed upwards into the axilla, with the arm held outwards from the side to a right angle (45° will suffice if pain or inconvenience is caused), and with the patient leaning towards the injured side. The plate is placed on top of the shoulder, at right angles to the cylinder. Such a skiagram will yield an excellent view of the glenoid cavity, coracoid, acromion and head and upper end of the humerus. The position of a foreign body, that of a fracture at the neck of the humerus, etc., can at once be determined as regards the antero-posterior plane.

(130) The Passage of Fluid Through the Body of the Human Stomach.

George Jefferson (*Archives R.R.*, May, 1915) throws an entirely new light on the passage of fluid through the body of the human stomach, and the silhouette, as obtained by the bismuth meal during this physiological action. In the normal, hypertonic stomach, it has long been known that the fluid first collects as a pool in the bottom of the *Magenblase*, and from here it runs down in a narrow stream, along the lesser curvature to the *pars pylorica*. In an adult normal stomach, inspection yields no indication of such a canal, though it is present in the fœtus (Lewis' *canalis gastricus*) and presents its most perfect form in the ruminants. Much stress has previously been laid on the folds of the mucosa forming such a channel (Waldeyer's *Magenstrasse*); but these are not sufficient to account for the phenomenon. The solution, he points out, is to be found in the anatomical distribution of the inner or oblique muscle, when the stomach is examined in the vertical position, as seen in radiography. This muscle layer forms an inverted U over the stomach, and by its specialized contraction, aided by the mucosal ridges, forms this physiological canal. This yields an explanation for certain clinical findings hitherto unexplained, such as the vomiting of pure bile when the stomach itself contains a large supply of food.

(131) The Röntgen Diagnosis of Gall-Stones.

The Röntgen examination for gall-stones is again being urged by L. G. Cole and A. W. George (*Boston Med. and Surg. Journ.*, March, 1915). The authors point out many reasons why the results, until recently, were so rarely positive as to make the examination practically worthless. By improvement in technique they anticipate that the greater proportion of gall-stones can be detected. They insist on very minute attention to details, numerous plates, with a very small cone, being made, preferably in pairs, to obtain a plastic effect. The use of screens is immaterial. They do not agree as regards previous catharsis; George is opposed to it; Cole, on other hand, advocates it, combined with total abstinence from food for 12 hours, and with artificial injection of air into the colon in certain cases. The aim is to obtain soft "monotonic" plates, in which well-marked gradations in density between the soft tissues are shown. Fine bone details are of no importance. The importance of using an extremely small cone, showing only a limited area, is emphasized, as, by its means, secondary rays are generated to a much less degree, and, therefore, fogging is greatly diminished. The cone should be pointed downwards as a rule, so that the axis of the rays is parallel to the under surface of the liver. The area examined should extend from the eleventh rib to the crest of the ilium. Owing to the smallness of the area, numerous exposures are required, and hence filters must be used to avoid dermatitis. In examining the plates for gall-stones, oblique illumination of each pair of plates against the open sky is best. The main difficulty lies in gall-stones, which contain very little or no calcium. Numerous pitfalls have to be avoided, the main ones being costo-chondral ossification, stones in the kidney, calcified mesenteric glands, food in the cap, and food in a single haustrum of the colon at the hepatic flexure.

(132) Treatment of Recurrence and Metastases from Carcinoma of the Breast.

Pfahler (*Archives R.R.*, May, 1915), in treating a large series of breast cancers, maintains that radio-therapeutic measures have done more than any other form of treatment. He urges the administration of thyroid extract during treatment, as undoubtedly the thyroid must be affected by the constant irradiation of the neighbouring area. The majority of these carcinomata occur at a time when thyroid secretion tends to diminish. The division of the skin into areas, the filtration of the rays, the degree of penetrability of the rays, and the measurement of the dose are the main features to be considered. He lays it down that the erythema dose, as measured by the S. & N. pastille, should never be exceeded. Post operative treatment should be just as thorough as if the disease were palpable.

BIOLOGICAL CHEMISTRY.

(133) Fats in Muscular Metabolism.

G. Winfield has made experiments to test the part played by fats in the metabolism of muscles (*Journ. of Physiology*, May, 1915). He estimated the percentage amount and the iodine value of the fatty acids (*a*) of normal muscles, (*b*) of muscles fatigued under anærobic conditions, and (*c*) of muscles fatigued under anærobic conditions and then restored by the passage of a current of oxygen. The results showed that there was no evidence of any diminution of fats during the period of survival. There is thus no evidence that the lactic acid known to be produced during muscular contraction is derived from fats. During the period of time that the muscles were kept alive in these experiments the quantity of fats in the muscles underwent no change of greater amount than the experimental error in the process of estimation. The experiments were performed upon frogs.

(134) Intestinal Origin of Urinary Indican.

A. Distaso and J. Schiller have studied the relationship between the intestinal flora and the derivatives of tryptophane in the urine (*C.R. Soc. Biol.*, Paris, June, 1915). They had discovered previously that the addition of lactose or of dextrin to the diet of white rats brought about the establishment of an intestinal flora, composed entirely of bacillus bifidus. They have noted that this bacillus does not form indol when grown on artificial media. The addition of the carbohydrates to the diet has led to the disappearance of the indol reaction in the urine in forty-eight hours. This condition continues until the sugar is removed from the dietary. They observed that the addition of boiled potatoes to the food of the rats changed the character of the intestinal flora. Members of the colon group dominated the flora. These bacteria form indol in artificial cultures. When boiled potatoes are administered to the rats the indican reaction becomes positive when performed with the urine. By alternating the diets of potatoes and lactose the presence of the indican reaction was concomitant with the development of the colon group in the intestines, while the reaction became negative when the bacillus bifidus dominated the intestinal flora. The alternation of the diets was repeated many times, with the same results in every case.

(135) Secretion of Bile.

G. Volborth (*C.R. Soc., Biol.*, Paris, June, 1915) has observed the flow of bile into the gall-bladder in dogs in which biliary fistulæ have been prepared, leading from the gall-bladder to the abdominal surface of the body. The common duct has been left patent in these experiments. In these dogs he has noted the influence of introducing different substances into the stomach upon the amount of bile entering the gall-bladder. He gives details of the results of placing milk and olive oil in the stomach. The presence of these substances in the stomach and their passage into the duodenum diminish the quantity of bile flowing into the gall-bladder. On the other hand, the administration of hydrochloric acid, even in a dilution of 1 part in 10,000, augments the flow of bile into the gall-bladder. When bovril is placed in the stomach the passage of bile into the gall-bladder ceases; but when the contents of the stomach, rich in hydrochloric in consequence of the stimulation of the extractives in the bovril, commence to pass into the duodenum, the flow of bile into the gall-bladder diminishes. If an alkali be added to the bovril the flow of bile into the gall-bladder does not diminish until some hours have elapsed. He has also observed a new and unexpected fact. When the bile flows into the intestine and the amount entering the gall-bladder is diminished, the liquid obtained from the fistulæ becomes less coloured and more viscid. At the end of an hour a colourless liquid, free from bile, flows from the canula. The amount of this liquid is considerable. It possesses none of the digestive powers of bile. Since this material must be stored in the gall-bladder in the intact animal and then discharged into the intestines, the investigator is commencing experiments to determine its place in the digestive process.

(136) Removal of Albumin from Urine.

G. Tracy and W. H. Welker have employed a cream of aluminium hydrate for removing albumin from urine (*Journ. of Biological Chemistry*, August, 1915). In studying the partition of nitrogen in specimens of urine containing albumin, it is necessary to remove this protein before proceeding with the analysis. The albumin interferes either directly or indirectly with the application of several of the methods usually employed. This protein is often removed by coagulation and filtration. When the amount of protein is considerable the quantitative removal is readily carried out. With small percentages of protein it is often impossible to get rid of a more or less marked opalescence. They have found that a cream of aluminium hydrate, prepared under certain conditions, has the power of removing proten quantitatively. They tested the process by adding protein to a fixed amount of human urine and then comparing the results after precipitation with the results obtained on another similar quantity of the urine. Estimations have been made of the total nitrogen, urea, ammonia, creatinin, uric acid and purin bases. The results of their controls and tests showed that aluminium cream removes no appreciable quantity of nitrogen from normal urine and that the addition of a cream of aluminium hydrate can be used to remove protein from urine without any measurable effect on the amount of the normal urinary nitrogenous constituents.

(137) Estimation of Sugar in Blood.

P. A. Shaffer (*Journ. of Biological Chemistry*, Oct., 1914) has given up the extraction of sugar from blood by means of methyl alcohol, and has described a better method. The blood is drawn into a pipette containing a few grains of potassium oxalate. An accurately measured volume is run into water. The proteins are removed by heating the mixture to the boiling point, and adding a few drops of dilute acetic acid until flocculi appear. Five cubic centimetres of a solution of colloidal iron are added, and the mixture well shaken. The proteins separate in flocculi, and can be removed by the centrifuge. An aliquot part of the fluid is then utilized for the estimation of sugar. This is done by Bertrand's method. The results obtained represent the sum of the amounts of sugar in the plasma and corpuscles, and are correct to 5%. The author emphasizes the importance of the conditions under which the blood is drawn, if useful indications are required concerning the amount of sugar in the blood.

(138) Creatinuria.

A. E. Taylor has collected data (*Journ. of Biological Chemistry*, July, 1915) which indicate that the presence of creatin in the urine of children cannot be regarded as related to a deficiency of carbohydrates in the diet. By estimating the quantities of creatinin, creatin and ketonic acids in the urines of children he has been able to establish the presence of creatin in the urine of children. He finds that the absolute figures for creatin plus creatinin compare approximately with those of adults when corrected for the differences in the weight and the probable mass of the muscular tissues. He concludes that these figures confirm for children the postulate of the relation of the amount of creatinin to the mass of the muscle substance.

(139) The Detection of Morphine in Chronic Opium Poisoning.

J. Rosenbloom (*Biochemical Bulletin*, March, 1915) has examined the liver, removed three hours after death, from a woman who had taken large amounts of laudanum for about five years. He has not detected any morphine in the liver. As a control 150 mgms. of morphine sulphate have been added to liver, and the same technique has been employed for its detection and estimation. Practically the whole of the morphine has been recovered. The absence of morphine from the liver in this case indicates that the morphine has been so changed in the organism as to escape detection by the use of the ordinary methods. In accordance with the results of other observers he finds these changes to be most marked in cases of habituation to the alkaloid.

LIVERPOOL CAMP ENQUIRY.

The final report of his Honor Mr. Justice Rich has been printed, and was laid on the table of the Federal Parliament last week. The full text of the report is printed below, with one omission, viz., the diagram of the section of a hut. In a future issue the report will be analysed in reference to the evidence given.

REPORT ON THE LIVERPOOL MILITARY CAMP.

By His Honour Mr. Justice Rich.

18th August, 1915.

May it please Your Excellency:

I have the honour to state that on the 12th July last I was appointed Royal Commissioner to inquire and report upon certain charges made in respect of the administration of the Military Camp at Liverpool, in the State of New South Wales, by Richard Beaumont Orchard, Esquire, Member of the House of Representatives of the Commonwealth, in a speech delivered by him in Parliament on the 1st July last and reported in *Hansard*, pages 4513-4520.

Upon the receipt of the Commission on the 14th July last I opened the inquiry at the Court House, Sydney, and decided to sit at the Liverpool Camp for the examination of witnesses.

As Mr. Orchard was not ready to proceed with the evidence, I adjourned until the 16th July last. On the 15th July last I inspected the Liverpool Military and the German Concentration Camps. On the 16th July last I took up my quarters at the Liverpool Camp and began the taking of evidence. I continued to live in the Camp until the 30th July last.

Evidence was taken by me on the 16th, 17th, 19th, 20th, 21st, 22nd, 23rd, 24th, 26th, 27th, 28th, and 29th days of July last.

On the 21st and 27th July last I made two interim reports to Your Excellency with regard to matters which I considered required immediate attention.

On the 31st July last I went to Melbourne and visited unofficially the Military Camps at Broadmeadows, Flemington, and Seymour, and the Base Hospital, St. Kilda Road. Upon my return to Sydney I forwarded, on the 12th August inst., certain recommendations to Your Excellency, which are to be taken as part of this report.

I have now the honour to make my final report to Your Excellency.

Mr. H. E. Manning was instructed by the Commonwealth Crown Solicitor to appear and "to lay before the Commission evidence of any facts at all which may have a bearing on the subject-matter of inquiry, and to see that those facts are laid before the Commission, irrespective of whether they are harmful or otherwise to any individual or to the Department, the object being to enable your Honour to make a thorough investigation into the matter in the public interest, and to ascertain whether there have been any defects in the administration of the camp, in order that the Department may know for future guidance what remedy should be adopted."

That is the proper attitude for the Crown to adopt in inquiries of this kind. I need hardly say that Mr. Manning fulfilled his duty faithfully and well. Both he and Mr. R. H. Long Innes, who was assigned by the Attorney-General as Counsel for Mr. Orchard, have given me generous help and greatly lightened my task. Mr. Milner Stephen appeared for Dr. Schlink. Colonel Kirkland and Major Edwards appeared for the Defence Department,

The charges reported in *Hansard* at pages 4513-4520 inclusive, may be summarized as follows:—

A. General insufficiency of equipment, in particular as to—
- (1) Clothing, uniforms, overcoats (pages 4513-4).
- (2) Rifles for training purposes; obsolete rifles; defective rifles from Lithgow (page 4514).
- (3) Want of rifle practice. Ammunition for training purposes, including dummy ammunition (pages 4514-5).
- (4) Bedding, including blankets and mattresses (page 4515).

B. Medical Services—unsatisfactory as to—
- (1) Hospital arrangements, including sick parades (page 4515).
- (2) Medicine bottles (page 4516).
- (3) Latrines, dirty and insanitary.
- (4) Callousness and indifference of doctors (page 4516).
- (5) Doctor of German parentage believed by some to have German sympathies (page 4516).

C. Housing accommodation unsatisfactory—
- (1) Draughty huts (page 4515).
- (2) Storage of bread in huts (page 4515).

D. Preferential treatment in German Concentration Camp as to—
- (1) Clothing (pages 4514, 4516).
- (2) Housing accommodation (pages 4515, 4517, 4518).

E. Miscellaneous—
- (1) Horses without food on one occasion; want of nosebags and halters (page 4517).
- (2) Restrictions placed on officers' leave (pages 4518-9).
- (3) Wasteful arrangements in connexion with water supply at Hospital (page 4517).

F.
- (1) Excessive centralization.
- (2) Discouragement of initiative (page 4519).

It must be borne in mind that, as the question of the suitability of the site was not the subject of any of the charges, I was not empowered to inquire into it.

Mr. Innes was concerned only to prove the charges made and not to attach the blame for the defects in administration to any particular person. The evidence before me proved all the charges, except *E* (2), but it was not of a nature to enable me to state precisely who was responsible.

I now propose to deal with the charges *seriatim*.

A. (1) and (4).—As to the charge in relation to the alleged general insufficiency of equipment, the evidence was directed to show—
- (1) that there was an insufficiency;
- (2) the efforts which were made to obtain supplies to meet the anticipated demand; and
- (3) the results with which these efforts were attended.

The evidence clearly establishes that the supplies of clothing, uniforms, overcoats, and bedding were, particularly during the month of June, wholly inadequate. Numerous instances were given by uncontradicted evidence of recruits sometimes having to wait several weeks before being supplied with articles of issue, such as dungarees, underclothing, cardigan jackets, overcoats, and proper bedding.

It appears also that in the Light Horse lines there was a shortage of overcoats, to such an extent that even the guard and pickets were in some cases not supplied with them at all, and in other cases only with overcoats which were in a very bad state of repair, often unclean, and sometimes verminous.

Again, when the huts were first occupied, the only bedding supplied consisted of three blankets and a waterproof sheet, with the result that the occupants were but ill protected against the hardness of the floor. Straw was an article of issue, but for some time was not supplied; and bed ticks for making the straw into mattresses were only supplied out of canteen funds during the month of June, after permission for the purpose had been obtained at the request of the Camp Commandant.

To ascertain the real cause of the shortage has been almost impossible. One extraordinary fact is that although on the 15th June two suits of dungarees were ordered to be supplied to each recruit upon coming into Camp, the order apparently had not been acted upon in the Camp, even after the inquiry had been instituted. I am not satisfied that the order even reached the Camp before the 23rd July. A return prepared by the Camp Quartermaster, showing the requisitions made by him, and the extent to which they were executed, shows that during the month of June there was a shortage of 4,500 pairs of socks out of a requisition by him of 6,000 pairs, a shortage of 3,000 singlets out of a requisition of 4,000, and a similar shortage of flannel shirts (*Exhibit A* 33). It appears, also, that an order was given on the 11th March last, that every man coming into Camp should be supplied with an overcoat, and yet long after that date there were instances of recruits being kept waiting for three weeks or a month without overcoats being supplied to them. A reference to the return *A* 33 will also show that requisitions were made in May and June last for

2,000 and 500 overcoats respectively, and of the total number requisitioned, only 500 had been supplied up to the 22nd July.

These requisitions were all made by the Camp Quartermaster upon the District Ordnance Department. I have come to the conclusion, upon the evidence of Major Brown, that the District Ordnance adopted the only measures available to obtain the necessary supplies, and that the shortage was due either to an insufficient supply being available from the factories, or else to the delay in the system of referring all matters in connexion with the supply of clothing to Headquarters in Melbourne.

The failure to supply proper bedding in the huts appears to be due to nothing less that a failure on the part of the authorities to recognize that a proper supply of bedding was necessarily involved in any ordinary consideration for the comfort of the men.

The evidence on this charge [*A.* (1)] includes that of Montague, 7, 8; Creft, 11, 12, 14; Gaggett, 15, 16; Talbot, 17, 18; Harrison, 34; Roscoe, 45, 46; McGhie, 47; Moore, 49; Husson, 50, 52; Schlink, 58-76; Kennedy, 81; Holland, 85; Wilkinson, 92; Martin, 97; Crockett, 100-1; Gillies, 101-2; Mills, 102; Donald, 102, 105; Bruce, 108; Fleming, 109; Woods, 112, 113; Allard, 113; Thompson, 115; Cooper, 121; Hackett, 123; Stanley, 136-148; Cotter, 152; Sullivan, 153-156; Orchard, 157-8; Smith, 184; Downes, 195-6; Finlayson, 196-7; Levitt, 198; Soane, 201-2; Woolley, 206; Crawford, 207-8; Allen, 210; Holyoak, 210-11; Baines, 211; Titterton, 211; Doig, 212; Brown, 216-221.

A. (4) Montague, 8; Ellis, 77; Donald, 103-5; Bennett, 113-114; Trotter, 120; Stanley, 136-148; Smith, 184-9; Hay, 198; Field, 198; Levitt, 198; Bosley, 199; Dawkins, 199; Crawford, 208; Allen, 210; Holyoak, 210; Baines, 211; Titterton, 211; Doig, 212.

A. (2).—*Rifles for training purposes, etc.*—The evidence proved that there were not sufficient rifles for instructional purposes, and the rifles used (Mark I.) were obsolete here, or as Major Heritage said, obsolescent in England.

It was also proved that some of the rifles from Lithgow had become defective in certain respects.

A. (3).—*Ammunition for training purposes, etc.*—It further appeared that some of the Reinforcements were sent away without adequate instruction, and in some cases without any instruction. In these cases, however, the men's records were sent with them and were marked "Musketry Returns, *Nil*," and instructions were given that such men were to complete their musketry training in Egypt before being sent to the front.

It was admitted that there was a lack of dummy ammunition.

These are topics which it is not expedient to discuss at length. The evidence is as follows:—

A. (2).—Creft, 9, 12 ;Bailey, 19; Keevers, 36; Halle, 38; Roscoe, 46; Moore, 49; Husson, 52; Kennedy, 81; Cooper, 121; Hackett, 123; Heritage, 124-128, 132-3; Fisher, 129-131; Taylor, 131 (confidential report dated 26th July, 1915); Chalker, 134; Cotter, 153; Smith, 186; Shipley, 193; Luscombe, 205.

A. (3).—Wallace, 6, 7; Creft, 12; Taggett, 16; Coates, 18; Ewing, 19; Keevres, 36-38; Halle, 38; Donald, 103; Fleming, 109; Thompson, 115; Simpson, 120; Cooper, 121; Heritage, 124; Fisher, 128-131; Smith, 188; Shipley, 193-4; Kirkland, 194; Luscombe, 205.

I presume that on the transports there are many opportunities for musketry instruction and rifle practice, including firing at miniature ranges and floating targets.

B. (1), (2). (4).—*Medical Services.*—To deal satisfactorily with the charge that the hospital services are unsatisfactory, a clear distinction must be drawn between the hospital establishment and its administration.

The establishment consists of—

(1) The field hospital proper, capable of accommodating 150 patients;
(2) The cottage hospitals, comprising two cottages, staffed by female nurses and intended for the more serious cases, for which accommodation cannot be found in the city hospitals;
(3) Measles hospital, where over 200 cases were dealt with;
(4) Measles contact camp, through which over 1,000 men have passed;
(5) The venereal compound, in which 254 patients have been treated; and
(6) A dispensary.

So far as the accommodation is concerned, it appears to be adequate for the requirements of the Camp, and there should be no difficulty in making any additions to the establishment that may be required.

The equipment of the hospitals, however, leaves much to be desired. The stretchers and bedding appeared to be sufficient; but the supply of ordinary utensils such as bed pans and sputum mugs was altogether inadequate, resulting in many cases in serious inconvenience to patients. There seems to me to be no excuse whatever for the failure to supply a sufficient number of bed pans for the full requirements of the hospital, for the use of ordinary jam tins for the purposes of urination, and the indiscriminate use of these articles among patients suffering from various forms of infectious complaints.

The supply of medicine bottles was also wholly insufficient for the demand, the result being that the practice grew up of refusing to provide medicine to be taken away by the men unless they were able to supply their own bottles.

The administration of the medical services was also clumsy and uncertain. Sick parades were held at various times during the day, the first taking place about 7 a.m. The numbers on a parade frequently amounted to upwards of two and three hundred men. Until quite lately no waiting tent was provided for these men, many of whom were often kept for two or three hours in the open in all sorts of weather.

The lines are about one mile from the A.M.C. The effect of marching sick men from the lines to the A.M.C. and keeping them waiting for their turn for treatment cannot but aggravate their illness.

In considering the administration of the venereal compound, the evidence was chiefly directed to—

(1) laxity of discipline in allowing patients to escape; and
(2) carelessness in disposing of wads.

Remedies have been effected since Captain Grigor was placed in charge. If the compound is allowed to remain at the Camp still more effective measures must be adopted to prevent the escape of men who, in their diseased condition, are a menace to the health of the community.

All other considerations apart, it is not fair to these men—victims for the most part—that they should be kept huddled up near a public road and exposed to the public gaze. The compound should be moved to a separate camp, where this class of patient should be kept. This is, I believe, the practice in Victoria.

The faulty administration of the A.M.C. appeared to me to be due chiefly to the insufficiency of the staff. The number of doctors was too small to secure proper attention to the requirements of the patients, and the doctors had practically no time to teach and train the staff. The officer commanding the A.M.C. was not in attendance until the afternoon. Continuity of management was also impossible, owing to the fact that the doctors were constantly being changed, according to the requirements of the Expeditionary Forces, with the result that the new doctors were frequently unaccustomed to Army work. It was due to these facts that a certain portion of the men, erroneously, as I believe, attributed callousness and indifference to the doctors in their dealings with the patients. Again, although there has been from time to time in the lines a supply of men trained and qualified in ambulance work, yet the authorities do not appear to have used sufficient discrimination in their choice of A.M.C. men, to enable them to obtain a full supply of the competent men available. The evidence shows that for the most part the orderlies were untrained, incompetent, and inattentive. I am aware that there is a scarcity of doctors owing to the depletion caused by the war, but Dr. W. G. Armstrong told me that the staff of the Public Health Department, Sydney, had offered its services to the Director of Medical Services. Dr. Armstrong is a well-known expert in the public health, and has offered to supervise the sanitary conditions of the Camp. I also under-

stand that many of the Sydney doctors are willing to give their services. If these are accepted the A.M.C. staff would have the advantage of consulting with senior and experienced doctors.

Dental Corps.—At present there is no organized dental corps in the camp at all. This appears to be an anomaly, seeing how great is the importance attached to the condition of the teeth by the military authorities.

References were made during the evidence to resources available for services in connexion with the Camp. Generally, there appears to be a desire on the part of large numbers of citizens—mostly professional—to place their services at the disposal of the military authorities as far as possible during the war. I refer in particular to the offers of the New South Wales Health Department, the Sydney doctors, and dentists, to render assistance in the discharge of medical and dental services.

These offers immediately suggest to me that it is advisable to recommend the mobilization of the available medical and dental resources, enrolling members and granting temporary commissions.

My observations with regard to medical services are not directed to the administration of the A.M.C. by Major Lawes. He was not attached to the hospital as S.M.O. until the 13th August last.

As to dental services, see evidence of Captain Donald Smith, pages 206-7.

The following is the evidence directed to:—

B. (1).—Montague, 7, 8, 9; Creft, 11, 13, 14; Taggett, 16; Kennedy, 17; Bailey, 19; Ewing, 19, 20; Leathart, 31, 32; Eyles, 32, 33, 34; Harrison, 34, 227; Roscoe, 46; McGhie, 48; Moore, 49; Husson, 51, 53; Armstrong, 54-8; Schlink, 58-76; Birrell, 78-79; MacLea, 79-80; Kennedy, 81; Wall, 82-5; Wallace, 88-91; Wilkinson, 91; McGouen, 97; Higgs, 98-99; Hudson, 100; Cockett, 100; Donald, 104-5; Fleming, 109; Thomas, 110-111; Walters, 112; Bennett, 113-114; Thompson, 115-116; Simpson, 120; Cooper, 121; Chalker, 135; Thorne, 155; Orchard, 158, 161; Lawes, 161, 164-204; Partiett, 164-5; Perkins, Dr., 167-171; Lawrence, 181, 182, 228, 229; Young, 182; Roberts, 183; Gunnell, 190; Finnamore, 190; Stuart (Sir T. A.), 202; Henderson, 209, 210; Baines, 211; Titterton, 211; Fowler, 212; Hosking, 212; Smith, 213; Purser, Dr., 222-4; Fetherstone, Dr., 224-227.

B. (2).—Creft, 11; Moore, 49; Husson, 51; Kennedy, 81; Thomas, 110; Walters, 112; Lawes, 162; Henderson, 210; Titterton, 211.

B. (4).—Coates, 18; Harrison, 35; MacLea, 80; Kennedy, 81; Wilkinson, 92; McGouen, 94-7; Hudson, 100; Woods, 112; Thompson, 115; Chalker, 135; Field, 198; Hosking, 213, 213, and exhibits (*A.*7) and (*A.*8).

B. (3).—*Latrines.*—The site chosen for the latrines seems to be the most suitable for the purpose in the Camp. The latrines, themselves, however, are neither roofed in nor floored, the consequence being that in wet weather it is impossible to use them with any degree of comfort. It appears to be unavoidable also that a certain amount of urine should remain on the ground round the pans, and be carried about on the men's boots to the tents and huts.

This objection would disappear if the floors were cemented and flushed occasionally with a hose.

The fact that no lights are provided within the enclosures and no privacy is obtainable greatly added to the discomfort of the men.

The latrines were certainly in an insanitary condition, and this was chiefly due to the fact that they were neither roofed nor floored.

Their condition from time to time may be ascertained by reference to the following evidence:—

Montague, 7, 8; Creft, 10; Roscoe, 46; Moore, 49; Armstrong, Dr., 57, 58, 166-7, 171-2; Wall, Dr., 82-3; Holland, 85; Martin, 97-8; Donald, 104; Justelius, 107, 133; Hodgson, 108; Thomas, 110, 111; Bennett, 113; De Burgh, 118; Cooper, 121; Thompson, 122; Smith, 185; Harrison, 191; Scott, 200; Lawes, 204; Titterton, 211.

B. (5).—*Doctor of German parentage.*—No charge was made against Dr. Schlink of disloyalty or of having had or at any time being identified with German sympathies.

Mr. Orchard's statement was that the doctor in charge was a German, of German parentage, and was believed to have German sympathies.

Dr. Schlink admittedly has a German name, and is of German parentage. The evidence also clearly proves that some of the men believed that he had German sympathies. See the evidence of Orchard, 27-31, 159-61; Leathart, 31-32; Husson, 52; Birrell, 78; MacLea, 80; Kennedy, 81; Holland, 85; Wilkinson, 111; Walters, 112; Chalker, 135; McKinnon, 149-152; Schlink, 156-7; Fallon, 183-4.

The impropriety and inexpediency of the appointment in war time of a person of German name and German parentage to a position in connexion with the defence of the country is so apparent as to call for no comment. The evidence to which I have referred proves that the appointment did, in the opinion of a large number of the soldiers, impair the satisfactory administration of the A.M.C. Another circumstance to which I wish to draw attention relates to the conditions of Dr. Schlink's appointment. He was allowed the privilege of attending to his private practice in Sydney every morning. I find a large military camp in which the staff of the A.M.C. is inadequate, and where there is no continuity of administration, because the doctors are constantly coming and going—some being sent to the front with the troops and others taking their places with no experience of A.M.C. work. Then I find the officer commanding the A.M.C. did not come on duty till about 4 o'clock in the afternoon. Is it possible that any concern—business, hospital, hotel, what you will—could be properly and satisfactorily managed under such circumstances?

I strongly disapprove of the practice of allowing any officer of the permanent staff such a privilege. He should give his whole time to his work. There must be no conflict between duty and interest. In my opinion, half service is no service.

I wish it to be clearly understood that I am expressing no opinion with regard to Dr. Schlink's zeal or efficiency, or powers of organization, or professional ability.

There was no charge or suggestion against Dr. Schlink with regard to any of these matters.

Draughty Huts: Cleansing of Huts: Drink.

C. (1).—Mr. Orchard's charges in relation to the construction of huts and the consequent effect on the health of the Camp have been investigated with as little restriction as possible. I have considered evidence on the design of the huts, and also on how far health has been affected by the particular designs; and, in addition, I have gone further and endeavoured to ascertain what additional causes, if any, contributed to the illnesses complained of. I have come to the conclusion that the huts are draughty and that the draughts, in many cases, were the cause of serious colds. Other contributing causes were: that after wet weather water was often allowed to remain under the huts and in pools about the streets and passages in the Camp; that the blankets used by the men were not sufficiently aired and sunned; that the clothing supplied to the men was, at times, insufficient; that no provision was made for drying clothes, and that the arrangements for washing and bathing were inadequate; that after inoculation the system is lowered and men become susceptible to sickness; that some of the men get drunk and lie out all night in the cold and wet; that there is a large body of troops encamped on a more or less confined space; that the men are constantly mixing with the people in town and city, and that people in large numbers visit the Camp. The draughts in the huts are due chiefly to the open spaces of about two feet between the roof and the top of the walls. The opening was left designedly to secure thorough ventilation, and for that purpose is eminently desirable, especially in summer. An attempt was made to ascertain a means of leaving the spaces for ventilation, and at the same time abolishing the draught. Mr. E. A. Scott's suggestion, which will, I think, be satisfactory, was to make a further opening along the ridge of the structure with a cowl outside and a shield to deflect the draught. It would be well to seek the advice of experts before determining the type of all future huts.

The officers in charge of units should insist upon careful cleansing and spraying of the huts.

The evidence is as follows:—Montague, 7, 8; Creft, 9, 12, 13; Kennedy, 17; Roscoe, 45; McGhie, 47, 48; Moore, 49; Armstrong, Dr., 57, 58; Kennedy, 81; Donald, 103-4-5; Justelius, 106-7, 133; Hodgson, 107, 114, 115; Thomas, 110; Bennett 113; De Burgh, 116, 118; Harrison, 116-7; Cooper,

121; Thompson, 121-122; Stanley, 136-148; Orchard, 158; Perkins, Dr., 169; Smith, 185, 187; Scott, 199, 200, 201, 203; Allen, 210; Holyoak, 211; Baines, 211; Titterton, 211; Hosking, 212.

Drink.—The evidence before me (Coates, page 215) was that the liquor sold at Liverpool and the vicinity was free from adulteration and up to standard, except in one instance, where the sample taken was five points below standard, the dilution being water. I have no evidence as to the purity of liquor sold elsewhere, except that the effect of some of the liquor on the men was so extraordinary as to suggest alcoholic poisoning (Dr. Schlink, page 65). The effect of excessive drink is to impair the efficiency of the soldiers, and endanger their health in the way I have mentioned above, and to expose them to temptations they might otherwise avoid.

If all hotels were closed to soldiers for the sale of liquor it is a matter of policy about which I express no opinion whether a wet canteen should be allowed where the quality and quantity of liquor are under strict control, and the profits are paid back to the soldiers, or a canteen should be established in which liquor would be supplied under a doctor's order, or what other steps should be taken to supervise effectively the sale of drink.

Storage of Bread in Huts: Kitchen Accommodation: Distribution of Food: and Cleansing of Eating Utensils.

C. (2).—The practice of keeping bread uncovered in huts will be put a stop to by the provision for lockers now being made. The carriage of bread to the lines by hand should be discontinued, and the use of light hand carts substituted.

It has been freely admitted by all parties concerned in the inquiry that the quality of the food supplied is the best obtainable.

The preparation of the food for cooking, the cooking itself, and its distribution as rations, leave much to be desired. In the first place, the cutlery supplied to some of the butchers is wholly unsuitable and inadequate for the purpose of severing the portions of the carcass. In most cases, all that is supplied to the butcher is an ordinary dinner knife of inferior steel, and tables unsuited for the purpose for which they were intended. Again, the butchers and cooks are called upon to work in the evenings after dark, and in the mornings before daylight. In some cases the only lighting available is supplied by candles, while at most the supply is from hurricane lamps.

The cooks up till now in the Infantry Camp have had to perform their work in the open, and in bad weather the disadvantages of this practice are obvious. In justice to the authorities, however, I should point out that ordinary field kitchens were in course of construction before the Commission sat, and appeared to contain adequate provision for the proper preparation of the food.

The distribution of the food is very unsatisfactory. There are no mess sheds, and the men are not supposed to take the food into the huts. The dixies are brought to the men as they squat about the ground. In some cases there is a scramble for the food, with the result that the last to come is the least served. Pannikins, to which soil or sand is adhering, are dipped into the dixies, with unwholesome and insanitary results.

The method of cleaning the dixies and eating utensils in vogue may very easily have constituted one of the chief causes of illness at the Camp. It appears that hot water and soda were available for the purpose in quantities which it was impossible for me to ascertain definitely; but it is undoubted that the general practice prevailing in the Camp was to clean these articles with cold water and sand. The sand used must, in many cases, have been impregnated with urine and expectoration. This practice prevailed in spite of definite rules and medical advice to the contrary. The mere mention of this fact necessarily carries with it the most strenuous condemnation of the highly objectionable practice.

My recommendations (Nos. 7 and 8) will, I think, do away with these unsatisfactory conditions.

The evidence under these heads is:—

C. (2).—Montague, 7; Kennedy, 17; Orchard, 158; Dawkins, 199; Creft, 9, 10, 12, 13; Roscoe, 45; McGhie, 47, 48; Moore, 49; Hussom, 51-53; Ellis, 76; Lipshutt, 87; Newell, 93; McGouen, 96; Harrison, 117; Simpson, 120; Stanley, 136-148; Smith, 185-188; Levitt, 198; Scott, 200, 204; Woolley, 206; Allen, 210; Holyoak, 210; Baines and Titterton, 211; Doig, 213; Holland, 85; Wilkinson, 92, 93; Martin, 98; Thomas, 111; Bennett, 114; De Burgh, 118-119; Armstrong Dr., 172.

Preferential Treatment in German Concentration Camp in Regard to Clothing and Housing Accommodation.

D.—The better conditions which obtain at this Camp are a startling instance of the benefit of decentralization, combined with the virtue of intrusting full power or freedom of action to a man who is not afraid of exercising his responsibilities, and whose business training enables him to organize and administer the Camp under his command upon efficient and orderly lines. In this war between nations, the time is fully ripe for organizing the services of all classes of the community. Professional men have already been mobilized. Business men might well be employed in matters where their training and experience would be of the greatest advantage to the military authorities, *e.g.*, in connexion with ordnance and on finance committees.

The evidence as to the German Camp is that of Sands, 40-45; Pirie, Dr., 77.

Miscellaneous.

E.(1).—It appears from the evidence of Captain Thorne, page 214, that the horses at the remount depôt were short of food on the 11th to the 13th May, and on the 12th June last, and Mr. Downes, adjutant of the Light Horse, deposes to a shortage in his lines from the 10th to the 23rd June last; the same witness at page 215 says that on the 14th of May last, nosebags were wanted badly, and from then on till 9th July last; meantime oat bags were used. At page 214, Mr. Downes stated that the Light Horse had always had good head stalls and good ropes to tie the horses up with. With regard to this charge, see also the evidence of Higgs, 98-99; Cockett, 100; Simpson, 120; Orchard, 158; McGrath, 207; Tunks, 221-222.

(2).—This charge was not pressed. Mr. Innes admitted that Colonel Kirkland's reasons for making the order for restricting officers' leave were adequate. The Commandant said that when he assumed command he found that there were 700 to 800 men in the Infantry Brigade absent daily without leave, and that all the officers were absent except one or two. After consultation with the District Commandant, the Camp Commandant issued Routine Order 159, placing restrictions on excessive leave (see page 174).

(3).—The arrangement of carting water from the water fire cock to the Measles Contact Camp every day during the past five months is not economical. The pipe could have been laid to the Camp at a cost of about £10; Donald, page 104; Thorne, page 155.

Centralization.

F. (1).—One of the causes to which Mr. Orchard attributed the maladministration of the Camp was the system of centralization, necessitating communication with Headquarters in Melbourne for official confirmation of comparatively trivial details. No doubt the system in substance does prevail. Dr. Schlink said it took him a month to get financial authority to erect a shelter shed for sick men on parade; that he had requisitioned on the 9th June last for a number of cottage hospital requisites, and up to date had had no reply; and that it had taken a long time to shift the hospital to its present site.

These form a sample of the many instances which might be cited from the evidence, showing the delay in obtaining recognized necessaries; and the suggestion has been made that this might be obviated by abolishing the whole system of requisitions for supplies on Headquarters and substituting a system of decentralization.

Reference has been made to observations of General Sir Ian Hamilton in paragraph 73 of his report, with the object of showing that, in the opinion of that distinguished organizer, the system adopted here would not be able to stand the strain of demands made upon it during the war. Evidence was given at the request of the Department by Mr. McAnderson (pages 208, 209), who attempted to deal with the question. He pointed out the probable advantage of giving the District Commandants a freer hand in the

management of their districts, but at the same time he strongly emphasized the difficulty of adopting this course in the case of a Public Department. He was apparently unable to suggest to me any rational alteration of the present system.

While I fully recognize that it would be desirable to decentralize as much as possible, the success of the scheme of decentralization must obviously depend on the ability of the individuals who are intrusted with the local management.

The scheme of allocating the military vote among the military districts and allowing the district headquarters a free hand in the expenditure of the amount so allocated to each district, could only be put in force at the commencement of the financial year. Such a scheme requires great administrative ability, considerable powers of organization, and large experience in military contracts.

I am unable to say whether the *personnel* of district headquarters possesses these qualities.

The recommendations I have made with regard to keeping district ordnance fully stocked in advance, No. 15 (*d*), and the provision for a petty cash account and a district finance committee, No. 15 (*e*), will, if carried out with courage and determination, enable the present system to be worked with efficiency during the continuance of this war.

It must also be borne in mind that any change in system at the present time, when the Department is taxed to its utmost capacity, would be fraught with a great danger of dislocation.

An instance of delay or of failure to carry out recommendations made by the Minister is supplied by consideration of the Minister's minute of the 9th March. That provides, *inter alia*, for the roofing of cooking places, shower enclosures, and shelters for supplies. The necessary financial authority in connexion with these works was not obtained until the 1st April, 1915. At the date of the Inquiry, although there had been urgent necessity for carrying out the work, it had not been carried out.

Lack of Initiative.

(2).—I consider that the system which prevailed before the war of referring a number of petty details to headquarters had the effect of paralyzing the initiative of the officers.

War Letter 81, which came into force automatically upon the declaration of war, failed in its object for one reason, because the officers having been trained "to pass it on" either shirked their responsibility, or were incapable of successfully executing the larger power which had devolved on them. This is evidenced by the fact that these powers were afterwards curtailed on the 26th April, 1915, by War Letter 15211.

General.

In the course of the Inquiry, Mr. Innes drew my attention to the fact that there was a very serious discrepancy between the numbers of men passing the doctors' test at the barracks and those actually enlisting.

This matter, as I pointed out to him, does not fall within the scope of my Commission. The matter, however, demands attention, and the remedy that suggests itself is to swear the men in immediately upon their passing the doctors' test and before giving them leave. If they then fail to re-appear, they can be treated as deserters.

Defects in postal and telephonic matters were remedied at my suggestion during the Inquiry.

I consider that the recommendations which I have had the honour to make to Your Excellency will introduce much needed reform, and will place the Camp on such a basis as will admit of its discharging its functions with a maximum of efficiency and a minimum of discomfort and hardship.

In order, however, to carry out any measure of reform, it is essential that the administration of the Camp should be handed to officers who are prepared to give their sympathetic and whole-hearted attention to the performance of their duties, and who may be trusted to display such a degree of thoroughness as leaves nothing to chance or muddling through.

It must be remembered that the men who come into Camp are raw recruits, and there are no old soldiers among them to inform them of their rights. Under the circumstances, the officers in charge of units should exercise more than ordinary care in seeing that all their reasonable requirements are attended to. While not shrinking from assuming and exercising the responsibility which is required of them, officers will remember that it has always been regarded as an axiom of military administration in the British Army that the comfort and well being of the men are the paramount duty of the officers, and that the men's interests must take precedence of those of the officers.

The recruits are offering their lives for their country, and they are entitled to reasonable care and comfort, without coddling and pampering.

The duty of the Camp officers is to train and harden the men by plenty of exercise and good food, and enable them to take the field fit and well.

The Spartan-like method of exposing soft recruits to unnecessary privations and hardships is not only cruel, but calculated to endanger their lives. In many cases the men may be permanently incapacitated and so become a burden on the country before they have had a chance of fighting on its behalf. This method, while increasing the expense of administration, impairs the efficiency of the force, and diminishes the numbers ready for active service.

I have the honour to be,

Your Excellency's

Humble and obedient servant,

G. E. RICH,

Royal Commissioner.

RECOMMENDATIONS.

Administration of Camp.

1. The administration of the Camp should be entrusted to a permanent staff, composed of Officers, N.C.O.'s and men, none of whom is to be available for service at the front. The men and as many as possible of the officers and N.C.O.'s should be supplied by mobilization from the Citizen Forces.

This permanent staff should carry on the whole administrative routine duties of the Camp, leaving the men of the A.I.F. entirely free to train for the duties which will be required of them at the front.

Routine duties to be performed by the men of the A.I.F. only as part of their drill and instruction.

The permanent staff will provide the following:—

(*a*) The sanitary squad;
(*b*) The Military Police and Provost's staff and men;
(*c*) All orderlies;
(*d*) All officers' servants;
(*e*) All orderly room and other clerks, typists, and secretaries;
(*f*) Sergeant or Master Cooks, to train cooks of the A.I.F.;
(*g*) The staff of the Camp Adjutant's Department (including the orderly room clerks, typists, and secretary); and
(*h*) The staff of the Camp Quarter Master.

2. For facility of administration, the Liverpool Camp should be divided into areas, corresponding more or less with Brigade Areas.

A Brigade Area should have a central permanent staff, and be subdivided into four smaller areas, corresponding with Battalion Areas.

Each Battalion Area should be officered also with its own permanent staff.

The Battalion Area should include four depôt companies, and if necessary a certain number of Reinforcements or other Expeditionary Units for purposes of receiving medi cal attention, etc.

Each Battalion Area would be co-terminous with a hospital and dental area, one doctor, and, if possible, one dentist, residing in the lines of each Battalion Area, with Pannier or Field Ambulance.

The staff required for each Battalion Area would probably be the following:—One doctor (with field pannier); one Adjutant; and one Regimental Quarter-Master; in addition to the staff for each of the four depôt Companies to be comprised in such area; each of such depôt Companies would require an O.C. (who might, as now, be a Staff Sergeant-Major), a Company Sergeant-Major (second in command), and a Company Quarter-Master Sergeant,

Each Regimental Quarter-Master would require a Regimental Quarter-Master's store, and the necessary assistants (to be furnished, as above stated, from the Citizen Forces).

3. The size of the staff required for the Liverpool Camp or any other Camp will, of course, depend upon the number of troops to be trained there at any one time, and the number of Brigade Areas into which it is to be divided. The adoption of this system will be of immense advantage, as it will permit of expansion, as the number of recruits increase. Immediately one Battalion Area is filled with its complement of men, the staff for another Battalion Area can be appointed, and the skeleton battalion made ready for the new recruits. Similarly, when one Brigade Area has been completed, a fresh Brigade Staff can be appointed and preparation made for a new Brigade Area.

Further advantages resulting from the adoption of this system will be—

(1) continuity of administration;
(2) each department and area will be self-contained;
(3) decentralization combined with responsibility; and
(4) on the Camp being reduced in size, the staff can be at once reduced by doing away with one or more areas, without affecting the *personnel* or impairing the efficiency of the rest of the staff.

Each area will, in fact, be a complete administrative unit in skeleton form, requiring only to be filled up with the men as the recruits come into Camp and form the depôt Companies.

When the officers for a definite A.I.F. Battalion have been appointed, the Commanding Officer will take over from the Battalion Area Adjutant the men in his area who are to form the new A.I.F. Battalion; and as soon as the Commanding Officer of the A.I.F. Battalion has got control of his organization the permanent staff of that particular Battalion Area will be available to organize a fresh Battalion Area. This principle will be equally applicable, with modifications, for the despatch of Reinforcements.

4. There should be an Armoury at the Camp, consisting of a small room as armourer's shop, fitted with an armourer's bench and the usual kit of armourer's tools, as issued in the service. It is desirable that a storeroom be attached to the armourer's shop. In this room "expanse stores," such as oil, flannelette, etc., could be kept and issued to the depôt troops. "Drill pattern" rifles, not on actual issue to troops, could be kept there also. Simple arm racks along the walls, and shelving, to be provided in each room. A building, 30 feet × 15 feet, with 10 feet partitioned off (a door in the partition) should suffice.

Rifles should be issued to recruits the third week after they are in Camp, and these rifles should be those the men are to fight with themselves, and not a loan issue.

Before troops are sent into the firing line, adequate musketry drill and rifle practice are essential.

5. Army Medical and Dental Corps: Mobilization of Civilian Services.

(*a*) I recommend the appointment of a permanent staff, consisting of the following:—1 Major, 2 Staff Sergeants, 2 Dispensers, 4 Sergeants, 8 Corporals, 2 Cooks. Doctors should be posted in the Areas, as I have already suggested.

No officer of the permanent staff should be allowed the privilege of private practice.

(*b*) A Dental Corps and a Base Hospital in connexion with the Camp should be formed under the command of an officer holding the rank of Major, and subordinate officers holding the rank of Captain.

Accommodation should be provided at the Camp itself for the purpose of examination of patients, extractions and treatments. The treatment should be completed at the Base Hospital (see the evidence of Captain Donald Smith, and Exhibits *A.* 44 and *A.* 45).

(*c*) The services of doctors and dentists not in the forces should be made use of. They should be mobilized and granted temporary commissions. In this way the A.M.C. would obtain the benefit of the help of senior and experienced doctors. In enrolling members of the A.M.C. preference should be given to recruits who have already had ambulance and sanitary experience.

Seats or forms should be provided in the waiting tent in the A.M.C. lines.

(*d*) Where soldiers are on sick leave from Camp or hospital, advantage should be taken of the homes provided by the Red Cross and similar societies. Lists of the homes should be sent to the Officer Commanding A.M.C., and he should be kept informed from time to time of the space available in these homes.

(*e*) Until the installation of a septic system, latrine pans in hospitals should be painted green, and in venereal compounds red, to distinguish them from those used in the ordinary latrines.

6. Public Houses.

All public houses throughout the Commonwealth should be closed to soldiers for the sale of liquor. Alternatively the public houses at Liverpool and within a radius of five miles of the Camp should be closed to soldiers at 6 o'clock. (See War Precautions Regulations 1915, r. 12).

Pickets should be placed in or near the hotels and instructed to see that no drink is carried away from the hotels by the soldiers in bottles or other receptacles for liquor. A further alternative is to place these hotels out of bounds.

The sale of liquor to civilians and smuggling by them to soldiers should be strictly prevented.

7. Light.

Electric light to be installed throughout the Camp; including the huts.

8. Kitchen Accommodation and Distribution of Food: Mess Sheds: Cleansing of Eating Utensils.

(*a*) The erection of covered-in kitchens, with suitable working accommodation for cooks and assistants and adequate lighting. Proper drainage should be constructed from the kitchens. Kitchen tables should be fitted with lockers for storage of tea, coffee, etc., and properly constructed fly-proof butchers' shops should be erected near the kitchens.

(*b*) The employment of trained cooks, many of whom are to be found in ranks. There should be a periodical medical inspection of these cooks, and their cleanliness should be insisted upon.

(*c*) The supply of adequate implements to the butchers and cooks, namely, proper butchers' knives, steels, choppers, blocks, tables and large covered dixies for peeled vegetables.

(*d*) The strictest supervision of the cleansing of all cooking and eating utensils. To provide the necessary facilities, there should be a full supply of hot water and soda available at all times.

(*e*) Light covered hand carts to be provided for delivering bread and meat.

(*f*) Dining sheds with cement floors should be provided. These should be enclosed with wire gauze, etc., to prevent any discomfort or the contamination of food which would be caused by the prevalence of dust and flies during the summer. They should be lighted with electric light so that they may be used at night time by the men for recreation purposes. If these sheds are not provided, trestle tables and forms should be provided in the huts. Instructions should be given to the officers to insist upon the orderly distribution of food.

9. Hot Water, Plunge Baths, Wash Houses, Ablution Benches, Showers.

(*a*) Overhead tanks with taps to be erected and a steam boiler installed to supply steam to water. This boiler can also be used for the heating and drying room, and supplying hot water for wash houses and plunge baths, and for the cleansing of dixies and eating utensils.

(*b*) Hot water plunge baths.

(*c*) Wash houses for washing clothes to be provided.

(*d*) Ablution benches should be provided consisting of a sufficient number of taps placed over a galvanized iron trough with a slight fall towards a sink at one end. Ground to be concreted for a distance of 2 feet 6 inches from the face of the bench, the fall inwards leading by a small drain to the sink. The back bearer being 4 inches wide, to carry soap, brushes, etc.

(*e*) Grids or boards to be placed under the showers, and where the bathers stand when dressing; pegs or hooks to be placed to hold the clothes of the bathers.

10. Airing and Disinfecting Blankets and Drying Clothes.

(*a*) Blankets to be marked so that each man can retain his own.

(*b*) Provision for disinfecting blankets, etc., and for drying clothes by the erection of a sterilizing and drying plant.

The use of the drying ground in fine weather should be insisted on for airing clothes and drying washing.

(*c*) Where the blankets are washed and sterilized by contract, care should be taken to see that the operation is supervised.

11. Venereal Compound.

Men suffering from venereal diseases should be sent to some distant Camp, as is the case in Langwarrin Camp, in Victoria. If this is not done a barbed wire entanglement, consisting of two fences at a short distance apart, should be placed round the present isolation camp and the wire electrified to prevent the escape of the prisoners.

12. Huts.

The draught in the huts is a matter essentially for experts. I recommend the adoption of the remedies suggested by the well known Sydney architect, Mr. Ernest Scott. They are as follows:—

"The more open type of hut is the better, and I should suggest the following alterations in accordance with attached sketch. The width would be 17 feet, to allow of 12 inches either side for lockers, 6 feet 3 inches either side for beds, with a 2 feet 6 inches wide central corridor.

"The lockers to be on either side of huts, 3 feet × 18 inches × 12 inches, and made moveable in sections of three, having the top and riser hinged, the latter chiefly for cleaning purposes, and fixed backs, ends and bottoms with staples, so that each man can lock up his kit, with hooks over lockers. This will prevent the draught from striking directly on the heads of the men and direct it upwards, as shown by arrows. The space between top of iron of walls and underside of plate to be 15 inches, with sheet of iron turned inwards, following rake of roof and turned up 2 inches on inner edge. This will direct the air upwards and not allow it to strike too directly on the men. The ridge to be ventilating, as shown, with the ends of iron turned up 9 inches, with a semi-circular ridge coming within 6 inches of iron of roof.

"Neither the roofs nor walls should be lined to prevent as much as possible the infection by vermin.

"In very frosty climates it may be necessary to line the ceiling to prevent the dropping of water on the men by condensation of heated air early in the mornings, but this is not likely in Sydney or Liverpool with well ventilated huts.

"With a view to airing bedding, I should suggest that gibbet brackets 2 feet long be hinged to walls every three feet externally, held in position when opened out or closed back by a stout cabin hook. These being under the projecting portion of roof, will be protected. The blankets, brackets, and bed space, should be numbered to ensure the bedding being replaced by the hut orderlies in their proper position on the floors.

"Where the huts are considered as permanent, the boards to be laid close-jointed longitudinally. If temporary, to be laid in sections the full width of hut by 5 feet wide, and at the junctions the tongue will fit into the groove of adjoining section and prevent any crack in floor to allow draught, somewhat after the system adopted in covering ships' holds, the sections being secured together at centre and ends by 12 feet × 3 inch × 1 inch cleats, the sides of these sections resting on cross bearers with 4 inch × 2 inch trimming at ends of joists.

"The height of huts to be 9 feet from floor to plate, roof pitch 20°. As much floor space per man as possible, as it is more important than cubic area, and in no case less than 25 super. feet."

Any draught arising from the openings in the floorings and the wall plates will be prevented by the construction of the lockers which are being placed in the huts. The type of locker which I have seen is faulty in construction, and cannot be cleaned, owing to the opening being on the top. The opening should be made from the floor outwards, so that the locker can be kept clean.

Mattresses should be provided, especially where the men are sleeping in the huts. The ground round and under the huts to be drained into the street channels.

The huts to be swept daily, scrubbed and sprayed weekly. If meals are taken in the huts they should be carefully swept, and broken food collected and removed after each meal.

I recommend that the advice of experts be obtained before determining the type for all future huts.

Having regard to the necessity for isolation of contacts, I suggest for consideration the necessity for subdividing the huts by wooden partitions into three or more spaces.

In addition, the huts and tents should be fitted with rifle racks and hooks for clothes.

13. Drainage and Formation of Streets.

The streets in the Camp should be formed and drains cut. An adequate supply of cinders for the formation of the streets can probably be obtained from the Railway authorities.

Depressions throughout the Camp should be filled in.

Surface water should also be drained off.

14. Latrines.

The latrines must be protected from the weather, and a complete septic system installed. In this system pedestal pan should be provided, and, to insure privacy, there should be small partitions between the pans carried not lower than the level of the seat or higher than a man's head when sitting. The floor should be concreted and the necessary facilities should be provided for flushing. The seats should be thoroughly scrubbed each day.

Sufficient lighting should also be provided to facilitate and encourage the utmost care on the part of the men in their use of the latrines.

Latrines in camps where there is no septic system should be protected from the weather. There should be covers for the pans and the seats should not be more than one inch above the pan. Pans when full should be carefully removed, so that the contents should not be spilled during the transit.

Urine tubs should be placed at night in the lines, outside the huts and tents.

"Whatever form the latrine takes, its successful management depends upon the enforcement of individual sanitary discipline, adequate *personnel*, and competent administrative control and supervision."

15. Miscellaneous.

(*a*) A clothes-store should be provided for the men's civilian clothes.

(*b*) The Camp should be notified of the number of recruits to arrive each day. This information should be promptly conveyed to the permanent staff of the battalion which is to receive the recruits in question. The recruits should arrive there in the early part of the day.

In anticipation of their arrival, the Camp Quarter Master should provide their rations and equipment, *e.g.*, greatcoats, dungarees (two suits), underclothing (two suits), hats, socks, blankets, water-sheet, straw and ticking (mattress), eating and drinking utensils.

The Depôt Band should meet the recruits and play them into Camp. Upon arrival they should be provided with a hot meal. Immediately afterwards their rations and equipment should be given to them.

(*c*) Embarkation of troops to take place at a time which does not necessitate their departure from Camp at too early an hour.

(*d*) Headquarters to take care that District Ordnance Store is always fully stocked a month or two in advance with the full requirements of all forces to be raised and equipped in each district.

(*e*) The Commandant of a Camp to be credited with a petty cash account of say £500, upon which he is at liberty to draw for small items of expenditure.

As regards heavy items of expenditure which cannot properly be met out of this petty cash, there should be a Finance Committee at District Headquarters for each Military District, composed of the District Commandant, the Assistant Q.M.G., the District Principal Medical Officer, and the District Paymaster. To this Committee all heavy items might be referred; its decision to be final if in favour of the expenditure, with, however, a right of appeal to Federal Headquarters if the District Finance Committee decide against the suggested expenditure.

(*f*) Notices should be posted in the huts and in other conspicuous places informing the men of the outfit in detail to which they are entitled, and the proper method of obtaining the same.

(*g*) A list should also be posted in each hut or tent of the men occupying such hut or tent, and opposite each man's name should be set out the distinguishing numbers of his rifle and blankets respectively.

(*h*) The police of the State should be asked to co-operate with the Military Police in order to prevent the visits of women of loose morals to the Camp or its vicinity.

(*i*) Provision, at the Liverpool Railway Station, for a drafting yard for horses in connexion with the Remount Depôt.

G. E. RICH,
Royal Commissioner.

Naval and Military News.

It is with great regret that we have to record the death from illness of Captain Arthur Verge, A.A.M.C., of Sydney. It has been announced that he died at Ghezireh, in Egypt, on September 8, 1915. He was serving as Medical Officer attached to the 6th Regiment of the Light Horse Brigade.

The military hospital arrangements in Western Australia are approaching completion. No. 8 General Hospital will comprise of the following parts: (*a*) A large building at Fremantle, previously used as an immigrants' home, to contain 150 beds, with a well-appointed operating theatre and good out-patient and massage departments. The hospital is regarded as quite satisfactory, save for the fact that the number of beds is limited. (*b*) A large house situated in the neighbourhood of the hospital referred to above, and standing in six acres of land. This house commands an excellent view of the sea. When the temporary buildings, now in course of construction, are completed, the hospital will contain 150 beds. (*c*) A building situated close to Perth, overlooking the river. This building contains 50 beds. At present, it is being utilized as a measles hospital in connexion with the camp, but later on it may be included in the general hospital scheme. (*d*) His Excellency the Governor's residence at Albany, which has accommodation for 80 patients. It is described as one of the most beautiful spots in the State. The climate is cool, and it is eminently suited for the purposes of a convalescent home. (*e*) A number of buildings of various sizes situated in the hills. The total accommodation of these buildings is approximately 100. (*f*) Some small private houses and residential clubs, which have been placed at the disposal of the Department.

The institutions (*a*), (*b*), (*c*) and (*d*) will be staffed from the central hospital, and will form an integral part of it.

It is reported that Major H. C. Garde (of Maryborough, Queensland) and Major T. G. Wilson (Adelaide) are in hospital in London, on the sick list.

The following appointments were gazetted on September 8, 1915:—

Army Medical Corps.

To be Lieutenant-Colonel—
Charles MacLaurin.

To be Major—
Honorary Captain H. C. Taylor Young, Australian Army Medical Corps Reserve.

To be Captains—
Eustace William Ferguson.
Baron Brooke and Norman Maxwell Gibson.
John Patrick Hastings.
Richard Hastings Hudson and Denis Joseph Glisson.

The following has appeared in the Commonwealth Government *Gazette*, September 25, 1915:—

1st Military District.

A.A.M.C.—
James King Patrick, to be Captain (provisionally and temporarily).

A.A.M.C. Reserve—
Wilton Wood Russell Love to be Honorary Major.

2nd Military District.

A.A.M.C.—
George Norrie, John Macquarie Alcorn, Harry Mander North, George Charles Willcocks, Ebenezer Alexander Sanbrook, Nathan Marcus Adler Alexander, William Irwin, Edgar Selwyn Harrison, Gerald Keith Smith, Roy Arnold Lovejoy, John Campbell Douglas, Alfred John Gibson, William Brodie Grant, Robert Edmund Woolnough, Falkner John Blaxland to be Captains (provisionally and temporarily).

A.A.M.C. Reserve—
Francis Percival Sandes to be Honorary Lieutenant-Colonel.
Andrew Davidson, George Raffan, Frederick Guy Griffiths to be Honorary Majors.
Gracius Herbert Broinowski, Edward Wilfred Fairfax, Samuel Harry Harris, Edwin Charles Temple Smith, William Johnstone Binns, Eric Sinclair, Alexander Edward Gibbes, Norman William Hansard, Frederick Charles Higgins, Henry Patrick Blaney, John Solomon Harris, Thomas William Watkins Burgess, George William Parramore, William Augustine Kelly, Eric Alfred Tivey, Francis Hilton Watson, William Rudolph Clay, Henry Christopher Moir, Colin Percival Stewart, John Wallace Watson, Redmond Clarence Hall Forster, Cyril Shepherd, William Mawson, William Frederick Litchfield, Harold John Ritchie, Henry Cyril Adams, Leslie Oswald Sheridan Poidevin, Cyril Joseph Fallon, Frederick Arthur Rodway, Wahab McMurray, Cecil William Abernethy, Rivis Mead, William Collings Dawson, Francis William West, Frederick Henry Cox, Francis Clements Crossle, and Henry Louis Harris to be Honorary Captains.
Glanville Kossuth Satchell to be Honorary Lieutenant.
Lieutenant (provisional) R. A. R. Green is transferred from Sydney University Scouts, and to be Honorary Captain.

3rd Military District.

A.A.M.C.—
Edward Champion, Algernon Claude Herbert Salter, Leonard Cyril Lade to be Captains (provisionally and temporarily).

A.A.M.C. Reserve—
Reginald Edward Weigall, John Samuel McLean, Gerald William Smithwick, Walter Thomas Harse, John Fullarton MacKeddie, John Lee Atkinson, William Algernon Andrews, William Ernest Jones, James Eadie to be Honorary Captains.
The age for retirement of Honorary Major W. H. Barker is extended under the provisions of Commonwealth Military Regulation 134, as amended by Statutory Rule 128/1914.

4th Military District.

A.A.M.C.—
Captain J. Booth is transferred to Reserve of Officers.
Major L. W. Bickle is placed on Retired List, with honorary rank of Lieutenant-Colonel, and with permission to retain his rank and wear the prescribed uniform. Dated 1st March, 1913. (This cancels the notification respecting this officer which appeared in *Commonwealth of Australia Gazette*, No. 14, of 22nd February, 1913.)

A.A.M.C. Reserve—
Roland Edward Harrold to be Honorary Major.
Archibald Campbell Magarey, Herbert Frank Shorney, Harold Maund Evans, Gilbert Brown, John Herbert Evans, and Hubert Cecil Carden to be Honorary Captains.
Frederick James Walden, Leslie Thomson Gillespie to be Honorary Captains.
Albert Joseph McShane to be Honorary Captain.

5th Military District.

A.A.M.C. Reserve—
Alexander Hernon Dick to be Honorary Lieutenant.

6th Military District.

A.A.M.C. Reserve—

Wendell Inglis Clark to be Honorary Captain.

THE SCHLINK FUND.

During the past week, seven cheques have been received in aid of the fund to assist Dr. Schlink. We wish to point out that Dr. Schlink has been compelled to incur expenses amounting to nearly £300 to defend his honour, and to repel an attack which reflected on the medical profession. Under these circumstances, it appears to us that it is the duty of his colleagues to assist him to meet his obligations.

	£	s.	d.
Amount previously acknowledged	24	3	0
Dr. Burfitt, Walter F.	1	1	0
„ Foreman, J.	3	3	0
„ Gillies, Sinclair	5	5	0
„ Litchfield, W. F.	2	2	0
„ Smith, P. E. Walton	1	1	0
„ Todd, R. H.	2	2	0
„ Worrall, Ralph	2	2	0
Total	£40	19	0

THE TOBACCO FUND.

The following subscriptions to our branch of the Overseas' Club Tobacco Fund have been collected in Western Australia. We beg to tender our thanks to the gentlemen named in the appended list.

Amount previously acknowledged, £16 18s. 6d.; Small subscriptions of 1s. each, collected by Dr. H. N. Prins, of Wickepin, £6 4s.; Dr. D. P. Clement, Perth, 7s.; Dr. F. A. Hadley, 7s.; Dr. H. J. Lotz, Fremantle, 7s.; Dr. R. C. Merryweather, Perth, 7s.; and Dr. J. E. Ramsay, 7s.; Total, £24 17s. 6d.

Public Health.

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending September 23, 1915:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Diphtheria	66	4	12	0	78	4
Scarlatina	9	1	2	0	11	1
Enteric Fever ..	—	—	6	0	6	0
Pulmonary Tuberculosis	15	6	12	7	27	13

The following is a return of the cases of epidemic cerebro-spinal meningitis notified to the Board during the week ending September 23, 1915:—

	Metropolitan Area. Cases.	Rural Districts. Cases.	Total Cases.
Military	—	—	10
Civil	22	13	35

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending September 18, 1915:—

Disease.	Cases.
Diphtheria	30
Varicella	36
Enteric Fever	6
Scarlatina	6
Pulmonary Tuberculosis	10
Malaria	6
Cerebro-Spinal Meningitis	7
Erysipelas	3
Ankylostomiasis	2
Total	96

SMALL-POX IN NEW SOUTH WALES.

The following cases of small-pox have been notified to the Department of Public Health, New South Wales, during the week ending September 26, 1915:—

Country.	
Newcastle and surrounding district	22 cases.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

From an official report issued by the Health Department, in Melbourne, the following facts in regard to the epidemic of cerebro-spinal meningitis have been culled. The data embrace the period ending September 23, 1915. There have been 382 cases notified to the Health Authority. Of these, 167 were reported by the medical officers of the military hospitals, 215 by civilian practitioners. The 215 civilian cases include 123 males and 92 females. During the period of the epidemic, 123 persons are reported to have died from this disease. The mortality rate works out at 32.7% (29.3% for males and 43.4% for females).

In regard to the source of infection, it is stated that in 30 of the 215 civilians affected, infection was traced to military cases. As far as can be ascertained, 86% of the civilians were not brought into contact with the military patients. On the other hand, 10 patients appear to have contracted the disease from civilians. It would therefore appear that in the case of 81.4% of the civilian patients, no contact with persons known to be suffering from epidemic cerebro-spinal meningitis could be ascertained.

In 139 cases the patients resided in the metropolitan area, while in the remaining 76 they lived in rural districts. The latter cases were spread over 52 municipalities.

Experience of past epidemics teaches that the diagnosis in civilian practice is not always reliable, and that the number of cases reported is usually higher than the number of actual infections. It would be unusual if this did not apply to the Victorian epidemic; moreover, the fatality of this disease among the soldiers appears to be higher than that among the civilian population, and the total mortality is obviously too low.

Hospitals.

THE ALFRED HOSPITAL.

The annual report of the managers of the Alfred Hospital, Prahran, Victoria, for the year ending June 30, 1915, has been issued. The Managers are able to record that the work has been carried out in a most satisfactory manner throughout the year, and the utility of the institution continues to increase, in spite of the adverse circumstances caused by the war and the drought.

The number of patients admitted to the hospital during the year was 2,439. In addition to this number 161 patients were under treatment on July 1, 1914. From this total the number of those remaining in the hospital on June 30, 1915, must be deducted to arrive at the number of patients whose treatment had been completed during the year under review. This number was 2,450. Of the total, 1,960 were discharged improved or cured, 207 were discharged incurable or unrelieved, and 274 died. The case mortality works out at 11.18%.

The number of patients attending the out-patients' department was 6,461; there were 2,973 patients treated in the casualty department, 740 in the night clinic, and 144 in the dental department.

The number of in-patients has increased from 2,103 in the year 1905-6 to 2,600 in 1914-15.

The average number of beds in occupation daily was 157.5. The average length of residence per patient worked out at 22.2 days.

A table of the number of patients treated for various diseases is published. A useful analysis of this table is fraught with difficulties, inasmuch as the diseases are tabulated according to a modified Bertillon classification, which is, in our opinion, unsatisfactory for statistical purposes. In attempting an analysis, we are conscious of the fact that the result must remain highly unsatisfactory, and that we are not justified in suggesting that the figures should be used as an indication of disease incidence. Turning in the first place to the affections of the cardio-vascular system,

there were 54 patients under treatment for organic diseases of the heart, presumably cases of chronic endocarditis. Of this number 21 died, which is equivalent to a case mortality of 38.8%. Six patients were treated for acute endocarditis; three of them died. Five patients suffering from pericarditis were dealt with and 3 died, while only one patient suffering from angina pecturis was admitted. This patient died. There were 13 patients under treatment for diseases of arteries, including aneurysm. Three of these patients died. One case of embolism with a fatal termination, 70 of affections of the veins without any deaths, 3 of hæmorrhage, and 13 of cerebral hæmorrhage, bringing the total number of cardio-vascular affections to 166. The case mortality works out at 25.3%. To these cases the rheumatic affections, cases of chorea, Bright's disease, and gout, in so far as these conditions affect the cardio-vascular system, should be added. The total is brought up to 245 with 55 deaths, *i.e.*, 22.4% mortality. In close association with arterial disease is alcoholic poisoning. There were 18 instances of this, but no deaths.

The number of malignant tumours dealt with during the year was 119. Twenty-two affected the buccal cavity, 25 the stomach and liver, 13 the peritoneum and intestines, 11 the breast, 6 the skin, 3 the female genital organs, and 39 other organs. The number of patients who died was 29, and the case mortality was therefore 24.3%. Among the non-malignant tumours 19 were entered under the heading tumours other than those of the female genital organs, while 5 non-cancerous uterine tumours were dealt with. Of the 24 patients thus affected 3 died.

Among the more important infective processes tuberculosis comes first. There were 86 cases in all, including 44 of the lungs, 6 of the abdominal organs, 5 meningitis cases, and 3 miliary cases. All the patients suffering from tubercular meningitis and miliary tuberculosis died. In addition 7 of the patients suffering from pulmonary tuberculosis and 2 of those suffering from abdominal tuberculosis died, making 13 deaths in all, which is equivalent to a case mortality of 20.9%. There were 55 cases of syphilis, including one of primary disease, 5 of secondary, 4 of tertiary, 4 of hereditary disease, and 41 of periods not stated. Two of the patients died. The next in frequency is diarrhœa and enteritis, of which there were 47 cases with 9 deaths. This yields a case mortality of 19.1. Twenty-five cases of influenza were dealt with, 22 of enteric fever (1 death), 13 of erysipelas, 8 of measles (1 death), *inter alia*. Of the infective diseases involving the respiratory organs, pneumonia heads the list with 153 cases and 31 deaths. The case mortality works out at 20.2%. Broncho-pneumonia comes next with 66 cases and 8 deaths, acute bronchitis with 27 cases, and chronic bronchitis with 17 cases and 6 deaths.

A table is set up giving the operations performed during the year. Unfortunately this is carried out without reference to the diseases for which the operations were performed. In the case of appendicitis it would appear that accurate information could not be obtained. Under the heading appendicitis an entry is made of 168 cases with 7 deaths. The operation of appendicectomy was performed 167 times with 4 deaths, 153 of the patients having been discharged as cured, and 10 remaining in hospital at the end of the year. It is not clear why 7 of the 168 patients with appendicitis should have died, since only 4 of the 167 patients operated on died. The mortality from the operation of 2.4% is very low. In two cases death was due to pyeloplebitis, in one it was due to general peritonitis and in one to carcinoma of the liver. There were 50 laparotomies performed; in 12 a fatal result ensued. This gives an operation mortality of 24%. Gall bladder operations were carried out 25 times, including 13 chlecystotomy, 9 cholecyctectomy, and 3 choledochostomy operations. Only one patient died, and death in this case was due to tetanus. An equally satisfactory chapter is entered under the stomach and intestine operations. Gastrostomy was performed 5 times, with one death, gastrectomy twice, with one death, which was due to suicide; gastro-enterostomy 6 times without a death; perforated stomach 3 times, with 2 deaths; entero-enterostomy once, with a satisfactory result; and colostomy 3 times without fatal issue. Perforation of the intestine due to enteric fever was the cause of one operation. The patient recovered. In another case suture of a perforation in the intestine failed to save the patient's life.

Among the gynæcological operations hysterectomy was performed 6 times, salpingectomy 43 times, oöphorectomy 22 times, ruptured ectopic gestation 7 times, an operation for ovarian cyst 7 times. Only one patient died. The record of this department is quite remarkable. No less than 239 gynæcological operations were performed. Fifteen of the patients were still in hospital at the end of the year, and of the remainder 220 were discharged as cured, 3 were discharged as relieved, and one patient who had suffered rupture of an extra-uterine pregnancy died.

The operative results in affections of the urinary sytem are not so brilliant, but are nevertheless extremely good. Suprapubic cystotomy was performed 7 times, and death ensued twice. The kidney was removed on five occasions without a death, and was incised on five occasions with two deaths. Prostatectomy was performed 8 times, with 2 deaths. In all there were 45 operations on the urinary tracts, and 7 deaths.

The maintenance account shows an expenditure of over £14,800. The Managers started the year with a bank overdraft of £1,855, and ended the year with an overdraft of £613. The Government grant amounted to £4,300. The municipalities contributed £536, and the Public Health Department £850, making £5,686 in all. £10,163 were obtained from private contributions and donations, collections, proceeds of entertainments, sales, etc., and fees paid for patients. The nurses' entrance fees amounted to almost £100, medical students' fees exceeded £54, and the University contributed £50 to the clinical pathologist's salary. It thus appears that the Government and municipal contributions amounted to little more than one-third of the revenue.

The cost per bed worked out at £84 3s. 7d. This amount is £2 1s. 4d. more than in the previous year. The increase was the result of the enhanced prices of provisions and other commodities. The cost per patient on the other hand was not increased. The average stay in hospital was shorter than in the previous year. Each patient cost £5 2s. for maintenance. The cost per patient per diem works out at just over 4s. 7d.

During the second half of the year under review a great strain was placed on the staff of the hospital owing to the number of members who joined the Australian Expeditionary Forces. Six members of the honorary staff, 5 resident medical officers, the clinical pathologist, and 7 sisters undertook military duty. Temporary appointments have been made to fill the places of the members who have gone to the war. The managers have placed at the disposal of the Defence Department a ward containing 40 beds, and have expressed their willingness to permit tents or temporary buildings to be erected in the hospital grounds should the necessity arise.

Obituary.

FERDINAND CAMPION BATCHELOR.

By the death of Colonel Batchelor, the medical profession in New Zealand has lost one of its best known members, one who has occupied a prominent position for more than a generation, and who has done much to set a high standard of professional work in the Dominion.

Ferdinand Campion Batchelor was born nearly 66 years ago in Norfolk Island, where his father was chaplain to the Settlement. He was taken to England at an early age.

He was one of the last links with the old system of medical education, having been apprenticed to a country practitioner, Mr. Jordison, of Ochendon, in Essex, at the age of 16 years.

After a preliminary training in compounding and the routine of village practice, he went to Guy's Hospital, where he played a prominent part in the athletic life of the school.

He qualified as M.R.C.S. and L.S.A. in 1871, and went to Edinburgh for the L.R.C.P. Before he was 21 he had married Miss Jordison, and settled down on Stratford-on-Avon. After the birth of his first child he had an attack of hæmoptysis. On this account he sailed for New Zealand as surgeon of an emigrant ship in 1874.

On arriving in Dunedin he settled in the suburb of Caversham, and after a few months of waiting, his opportunity

came, and he rapidly established a comfortable practice, and moved into the city. In 1877 he was appointed one of the four honorary physicians to the hospital. At that period all the members of the staff were designated in this way, and no differentiation of work was attempted.

He soon acquired a leading position in the profession, and in 1883 his bent for surgery placed him on the surgical side of the hospital staff, which was then differentiated into a medical side, consisting of three physicians, and a surgical side, consisting of three surgeons.

His health was now completely restored, and he found vent for his superabundant energy in hard exercise. He did all his rounds on horseback, was a champion tennis player and a good boxer. He was as keen over his work as over his play. It was his nature to do everything with all his might. In the pioneer stages of abdominal surgery in the hospital he was much influenced by the work of Lawson Tait, and went to England in 1885 to obtain first hand knowledge of what was being done in this direction. While in the Old Country he obtained the degree of Doctor of Medicine at the Durham University. He spent much of his time at the Chelsea Hospital for Women and in other hospitals, where he was able to witness abdominal operations.

On his return to New Zealand in 1886 he was appointed Lecturer on Midwifery and Gynæcology in the University of Otago and Physician for Diseases of Women on the Dunedin Hospital staff, the fiction of the time being that the appointment, which called for the biggest operations on the staff, was a medical one.

During the 'eighties, when Batchelor was feeling his way in abdominal surgery and Maunsell was evolving his method of intestinal anastomosis, the meetings of the local branch of the New Zealand Medical Association were very live affairs.

By 1889 his standing as a gynæcologist was so assured that he occupied the position of President of the Section for Diseases of Women at the Intercolonial Congress held in Melbourne in that year, and his presidential address is of great interest in showing not only his breadth of view but also his determination not to be bound by precedent or to take anything on trust. It also shows his absolute intolerance of hypocrisy or dishonesty in any form, and for vigourous denunciation of shady methods of practice, it is probably unique among presidential addresses.

On his return from Melbourne he made an active attack on the existing hospital conditions. In the following year he refused to operate further until his patients could be treated in better surroundings, and he retired from the hospital staff. He raised among his friends and patients a considerable sum of money for the erection of a new women's ward, and secured election to the Board of Trustees as a representative of the subscribers to the hospital. His action led to the appointment of a Commission of Enquiry into the state of the hospital, and resulted, after months of strenuous effort, in the erection of a new surgical block, which was the first modern block of hospital buildings in New Zealand.

To recuperate after this campaign, which had taken a great deal out of him, Dr. Batchelor took a nine months' holiday in 1892. He spent this holiday in visiting the American hospitals and in continuing his work in London. During this trip he was much impressed by the work of Kelly, of Baltimore, and in London saw a great deal of Bland Sutton's work.

In 1894 he again joined the staff of the Dunedin Hospital and was busy with the organization of the Intercolonial Congress, of 1896, which was held in Dunedin, and of which he was the President. As in everything else, he threw his whole energies into this work, and in 1895 went across to Sydney, Melbourne and Adelaide, and visited all the New Zealand towns, to arouse interest in the meeting and obtain promises of support.

In 1900 he sustained a severe blow in the death of his wife, who died at Cairo, on her way to London, where he had intended to join her.

The difficulties of teaching midwifery without a maternity hospital became accentuated as the classes of students grew, and he recognized that such an institution in connexion with the school had become a necessity.

In 1906 he tackled the unwillingness, parsimony and impecuniosity of the Charitable Aid Board, the Government and the University, raised the necessary funds from his friends, designed, built and equipped to the smallest details an institution complete in every way and admirably suited for the purpose in view. This hospital was opened for work in 1907. The management was entirely in his hands, and the result was a triumph in demonstrating that a high standard of efficiency was compatible with economy of administration.

At this period of his career, from 1905 to 1908, he was devoting nearly all his time to public work. During the session he used to lecture from 8 to 9 in the morning, and then spend a couple of hours operating or teaching in the gynæcological ward of the hospital. In the afternoon he used to visit the hospital in his capacity as member of the Visiting Committee, and no detail escaped his notice. He would end his afternoon at the Maternity Home, teaching, correcting and revising the students' notes. His evenings were chiefly devoted to work in preparation for his teaching and probably none of his students ever realized how much he was doing for them and the public in his self-sacrificing labour. He allowed nothing to stand in the way of his work for the school and the public. One Sunday he had a bad spill from his bicycle on a dangerous hill, breaking two ribs, and getting badly cut about; when he regained consciousness he trundled the remains of his machine four miles to the nearest township, borrowed a machine and pedalled forty miles over very hilly country, back to Dunedin, to be on the spot for his lecture on Monday. Not till after his lecture, on Tuesday, did he find time to have his ribs strapped up.

Nothing ever moved fast enough for him, and, believing that he could help the progress of the school more efficiently if he were on the University Council, in 1909 he resigned his position as Lecturer to contend a vacant seat as representative of the graduates. The graduates, however, preferred to be represented by one of their own number, and the school thus lost the services of one of the most single-hearted enthusiasts for medical education who ever faced a class.

Though the school sustained a serious loss, the step was a gain to Batchelor, as even his volcanic energy could not have kept him going much longer at the feverish high pressure of his work.

For the next two years he confined himself to consulting work, and few of his colleagues throughout the Dominion are not indebted to him for his generous help and assistance in their difficulties. He had a wide and ripe experience, and his methods were thorough to the last degree; he examined his patients inside and out, weighed, measured, X-rayed, took blood counts, analysed stomach contents and excreta and spent hours with his centrifuge and his sections of specimens. A doubtful case, in which the ureteric catheter confirmed a suspicious radiogram, filled him with joy.

In 1911 he again visited England, and spent four months in solid work, chiefly connected with pathology, at the Policlinic. In addition to this, he displayed a boyish enthusiasm over a course on nervous disease by Dr. Hawthorne. In August he spent a month motoring in Cornwall and Devon, but September found him hard at work at St. Bartholomew's Hospital, in the X-ray Department. This work had always fascinated him, and he had obtained excellent results by its means. It was characteristic of him to want to see and do everything for himeslf; he wanted to have at his service the latest possible knowledge and helps to diagnosis, and though he was over sixty years of age he had the keenness and mental activity to go to school again to master them.

In 1914 he lost his second wife; the shock of her death aged him very much. He took an active part in raising funds last year to erect a new home for the Medical School he had done so much to build up. On the outbreak of the war he volunteered for active service, with the avowed wish of giving his remaining strength to help those who were fighitng for the Empire.

He left with the Expeditionary Force, being attached to the Ambulance Corps, without salary, with the rank of

Honorary Lieutenant-Colonel and the position of X-ray expert.

In Cairo he found an alarming condition of unpreparedness for the rush of patients that was to come, and wore himself out in efforts to get things placed on a more satisfactory footing.

He had always been a firm believer in the efficacy of the C. D. Act, if it was properly enforced. He was of opinion that the views held by other medical men to deal with the question by so-called educational methods did not prevent a serious amount of disease among the troops. After a strong controversy he was given a free hand to open a lock hospital, and a portion of one of the hospitals was placed under his control. In this he obtained legal authority to enforce examination and detention. He soon had a daily clinic of 80 to 100 women, and, before he left, he had reduced the weekly list of venereal cases among the New Zealand troops to about a tenth of what it was when he took up the work. He never spoke much of anything he did, but, referring to the women, he said: "I think they were really grateful, poor wretches, for what was done for them." When their gratitude took the form of seizing his hand and kissing it in the public streets, he took steps to discourage such manifestations.

All through the heat of summer he worked 18 to 20 hours a day at his clinic, in charge of the X-ray Department at the Abbassia Hospital, visiting wounded or sick New Zealanders in all the other hospitals, writing reports and urging reforms, all the time losing weight and suffering much from sciatica and increasing loss of power in one leg, resulting from arthritis of two of the lumbar joints. He was finally invalided home by Sir Frederick Treves, but was only persuaded to leave in order to lay the medical necessities before the Defence authorities in person.

On his arrival in New Zealand he found that the base hospital staff and the hospital ship for which he had been striving had been despatched, and that the reorganization of the medical service under a Royal Army Medical Corps man, which he had urged, was under way.

He was able to be of service in the reorganization of the Trentham Camp, and then returned to Dunedin, where he underwent a small operation, which confined him to a private hospital for ten days. He always resented restraint in any form, and would not realize how frail he was. Two days after leaving the hospital, he died from heart failure when walking. Restless, energetic to the last, he died as he would have wished to do—on his feet.

Batchelor was a man of singularly simple and direct nature. He was not many sided, but he concentrated all his amazing energy on his work for his patients and the school and hospitals for which he did so much. He did not read outside the lines in which his life's work ran; a novel taken to him after his operation lay unopened, he lay in bed reading the medical journals that had accumulated during his absence in Egypt, lest he should miss something that might help him in diagnosis or treatment. This does not imply that he was not a man of wide sympathies, but merely that his taste did not lie in the direction of literature or art. Any humanitarian or educational movement found him ready to respond at once and to give freely to both in money and work. Whatever he undertook he carried through with all his strength, and in making his omelette never hesitated to break eggs.

He saw abdominal surgery grow from the period when an abdominal section was a desperate and hazardous last resort to its present position of security. Overcoming the shortcomings of his early education by his intense application and working to a great extent alone, he played for the greater part of his active career a prominent part in this development, at all events so far as New Zealand is concerned.

He cared nothing for money, and did not endeavour to accumulate it. As long as he had enough to live on, he was ready to devote his whole energies to unpaid work for the public and the school.

As a teacher, he was painstaking to a degree and helped his students in every way in his power, while when they passed into practice they could always command his prompt help in their difficulties. As a consultant, his opinion was widely sought and much valued by the members of our profession. His loyalty to his colleagues and the freedom with which he gave them of his best were a matter of course; they were an integral part of his character.

It is a fitting end to a career like his that he should have been engaged in useful public service till within three weeks of his death, and that he should have died on his feet. His only ambition was to get back to Cairo and do more service for his country. One cannot fancy him on the shelf or with failing powers. His loss will be felt and his memory honoured as long as one of his students lives, and the profession in New Zealand for generations to come will owe much to the example of a man who had not a small or ignoble thought in his nature.

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Replies to Correspondents.

Country Practitioner.—(1) Any person other than a legally qualified and registered medical practitioner may undertake the treatment of disease, but may be held responsible for his actions. A chemist or other person who uses a title implying that he is a qualified medical practitioner, or who leads the patient to believe that he is a qualified or registered practitioner is liable to prosecution.

According to Section 11 of the New South Wales Medical Act, the penalty for this offence is £50, and £5 a day for each day on which the offence is committed subsequent to conviction, or imprisonment for a period not exceeding twelve months. The law in Western Australia and other States is more powerful in protecting the public from unqualified practitioners.

(II.) It appears that some people are stupid enough to contract with an unqualified practitioner for medical attendance. In the case of a chemist forming a medical club, he would do so at his own risk.

(III.) We would advise "Country Practitioner" to communicate the facts of the case under his notice to the Director-General of Public Health, with a view to any action being taken by the Crown that might be deemed advisable.

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Medical Appointments.

The following have been elected members of a Standing Sanitary Board of the 2nd Military District:—

Principal Medical Officer.
Principal Medical Officer, Liverpool Camp.
Dr. R. T. Paton, Director-General of Public Health.
Captain W. G. Armstrong, A.A.M.C. Reserve, Senior Medical Officer, Board of Health.
Dr. J. B. Cleland, Chief Microbiologist.
Professor D. Welch, Professor of Pathology, University.

The Board will meet periodically, under arrangements to be made by the Principal Medical Officer, who will forward report to District Head Quarters on all matters pertaining to health of troops and prevention of disease.

Dr. G. J. Campbell has been appointed medical officer and public vaccinator at Donnybrook, Western Australia.

Dr. R. M. Mitchell has been appointed medical officer of health under the provisions of Section 11 of the Health Act, 1911-12, of Western Australia.

Dr. William Francis Quaife has been appointed Medical Officer under the Department of Education, New South Wales.

Dr. A. M. Watkins has been appointed Government Medical Officer at Griffith, New South Wales.

Dr. F. E. Cox, Acting Chief Quarantine Officer-General, Victoria, has been appointed an "officer" under the "Immigration Act, 1901-1912."

Dr. E. T. C. Schmidt has been appointed Quarantine Officer at Bundaberg, in place of Dr. T. H. May, resigned.

Dr. A. Clarke has been appointed Acting Chief Quarantine Officer (General), Tasmania, in place of Dr. S. A. McClintock, resigned.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xv.

Brisbane Hospital, Resident Medical Officers.
Department of Public Health, Tasmania, Chief Medical Officer.

Proceedings of the Australasian Medical Boards.

VICTORIA.

The following have been registered as duly qualified medical practitioners, under the provisions of the "Medical Act, 1890," and the "Medical Act, 1906":—

James McCusker, Internment Camp, Langwarrin, L.R.C.P. et. S. Edin., L.R.F.P. et. S. Glas., 1911.
John Alexander Shanasy, Nhill, M.B. et. Ch.B. Melb., 1915.
Maurice McKenna, c/o Dr. Lane, Footscray, M.B. et. Ch.B. Melb., 1915.
Francis Louis Trinca, 34 Lisson Grove, Hawthorn, M.B. et. Ch.B. Melb., 1915.
William Thomas Bernard O'Shaughnessy, 82 High Street South, Kew, M.B. et. Ch.B. Melb., 1915.
James Webb, c/o J. Little, Esq., 113 Punt Road, Windsor, M.B. Toronto, 1900; M.C.P.S. Ontario, 1901.

SOUTH AUSTRALIA.

The following have been registered under the provisions of the "Medical Act 1880" as legally qualified medical practitioners:—

Clayton, Joseph Woods, M.R.C.S. (Eng.), L.R.C.P. (Lond.), 1915.
Halahan, Samuel Handy, M.B., Ch.B. (Dublin), 1885.

Books Received.

THE HOUSE FLY, A SLAYER OF MEN, by F. W. Fitzsimons, F.Z.S., F.R.M.S., 1915. London: Longmans, Green & Co.; demi 8vo., pp. 87, illustrated. Price, 1s.

THE TREATMENT OF FRACTURES: WITH NOTES UPON A FEW COMMON DISLOCATIONS., by Charles L. Scudder, M.D. Eighth edition, Revised and Enlarged. 8vo., volume of 734 pages, with 1057 original illustrations; 1915. Philadelphia and London: W. B. Saunders Company. Melbourne: James Little. Polished Buckram, £1 6s. 6d. net.

ALVEOLODENTAL PYORRHEA, by Charles C. Bass, M.D., Foster M. Johns, M.D. 8vo., volume of 167 pages, with 42 illustrations; 1915. Philadelphia and London: W. B. Saunders Company. Melbourne: James Little. Cloth, net 12s.

1914 COLLECTED PAPERS OF THE MAYO CLINIC. 8vo. of 814 pages, 349 illustrations; 1915. Philadelphia and London: W. B. Saunders Company. Melbourne: James Little. Price (Cloth), 25s.

DIARRHŒAL, INFLAMMATORY, OBSTRUCTIVE AND PARASITIC DISEASES OF THE GASTRO-INTESTINAL TRACT, by Samuel G. Gant, M.D., LL.D. 8vo. of 604 pages, 181 illustrations; 1915. Philadelphia and London: W. B. Saunders Company. Melbourne: James Little. Price (Cloth), £1 6s. 6d.

THE CLINICS OF JOHN B. MURPHY, M.D. Volume IV., Number II. (April, 1915). 8vo. of 197 pages, 47 illustrations; 1915. Philadelphia and London: W. B. Saunders Company. Melbourne: James Little. Published Bi-Monthly Price per year: Paper 35s., Cloth 50s.

THE PRACTICAL MEDICINE SERIES, VOL. V.: Pediatrics, edited by Isaac A. Abt., M.D.; Orthopedic Surgery, edited by John Ridlon, A.M., M.D., with the collaboration of Charles A. Parker, M.D., and under the General Editorial charge of Charles L. Mix, A.M., M.D., 1915. Chicago: The Year Book Publishers; demi 8vo., pp. 225. Price, $1.35.

APPLIED IMMUNOLOGY: THE PRACTICAL APPLICATION OF SERA AND BACTERINS PROPHYLACTICALLY, DIAGNOSTICALLY AND THERAPEUTICALLY, with an Appendix on Serum Treatment of Hæmorrhage, Organotherapy and Chemotherapy, by B. A. Thomas, A.M., M.D., and R. H. Ivy, M.D., D.D.S., 1915. Philadelphia and London: J. B. Lippincott; demi 8vo., pp. 359, with illustrations. Price, 16s.

Diary for the Month.

Oct. 5.—N.S.W. Branch, B.M.A., Council (Quarterly).
Oct. 6.—Vic. Branch, B.M.A., Monthly.
Oct. 8.—N.S.W. Branch, B.M.A., Clinical.
Oct. 8.—S. Aust. Branch, B.M.A., Council.
Oct. 12.—Tas. Branch, B.M.A., Monthly and Council.
Oct. 13.—Melb. Pædiatric Society.
Oct. 14.—West. Med. Assoc. (Wellington), N.S.W.
Oct. 14.—Vic. Branch, B.M.A., Council.
Oct. 15.—East. Sub. Med. Assoc.
Oct. 19.—N.S.W. Branch, B.M.A., Executive and Finance Committee; Ethics Committee.
Oct. 20.—Vic. Branch, B.M.A., Clinical.
Oct. 20.—W. Aust. Branch, B.M.A., General.
Oct. 22.—Q. Branch, B.M.A., Council.
Oct. 26.—N.S.W. Branch, B.M.A., Organization and Science Committee; Medical Politics Committee.
Oct. 26.—Vic. Branch, B.M.A., Eye and Ear Section.
Oct. 27.—Vic. Branch, B.M.A., Council.
Oct. 28.—S. Aust Branch, B.M.A., Monthly.
Oct. 29.—N.S.W. Branch, B.M.A., Ordinary.
Oct. 29.—Melb. Hosp. Clin. Soc.
Oct. 30.—Vic. Branch, B.M.A., Nomination Papers for Election to Offices issued (returnable Nov. 10).

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A.
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Canterbury United F.S. Dispensary. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Mullumbimby District Friendly Societies. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, and Auburn. F.S. Lodges at Wellington. Newcastle Collieries— Killingworth. Seaham Nos. 1 and 2. West Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.